

添付書類-10

安全スペック英文案検討経緯書

1 General Requirements

JICA 安全標準スペック作成にかかる本格調査
 スペックの和文・英文作成・校閲用

2019.1.31 調査団宍戸作成

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スペック名: 第1章 総則

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安全宣言 発注者は、全ての工事関係者の労働災害ゼロを目指し、エンジニア・請負者、ステークホルダーと共に、工事遂行においてあらゆる安全衛生対策を実施することを宣言する。 本安全スペックは、発注者が最低限実施すべき安全対策の具体的な安全要求事項を規定している。発注者は請負者が本スペックの要求事項を遵守し、労働災害ゼロを達成することを強く期待している。		Safety Declaration The Employer hereby declares, in collaboration with the Engineer, the Contractor and other stakeholders, to execute all measures possible for the supreme target of eliminating any occupational accident in the Works. This Safety Specification stipulates the concrete health and safety requirements for the minimum measures which the Contractor shall take as his obligation. The Employer strongly expects the Contractor to conform the requirements of the Specification and to achieve “Zero Accident” in the Works.
1. 総則 1.1. 総則 1.1.1. 用語と定義 本仕様書で使用する用語の定義は以下である。 (1) 工事: 契約条件書 GC1.1.5.8 で定義されている工事 (Works) と同義である。 (2) 工事現場: 契約条件書 GC1.1.6.7 で定義されている現場と同義である。(GC1.1.6.7「現場」とは、本設工事が実施され、保管・作業場所を含み、プラント及び資材が搬入される場所並びに契約において現場を形成する箇所として明示されるその他の場所をいう。) (3) 工事関係者: 発注者の要員、請負者の要員、工事現場に入場を許可された者をいう。 (4) 関係省庁: 工事に係る省庁、行政機関、警察署や消防署等をいう。 (5) 安全衛生責任者: (Health and Safety Officer) は、GC1.1.2.5 で定義されている請負者の代理人のことをいう。 (6) 安全衛生管理者: 契約条件書 GC6.7 に規定の事故防止責任者 (accident prevention officer) と同義である。 (7) 法律: 契約条件書 GC1.1.6.5 で定義されている法律と同義である。 (8) OSHA 基準: 米国労働省 労働安全衛生庁が規定する安全衛生に関する基準をいう。		1 General Provision 1.1 General Provision 1.1.1 Terminology and Definition In this Safety Specification (hereinafter referred to as “the Specification”), the following words and expressions shall have the meanings stated. (1) “Works” means the permanent works and the temporary works as defined in the GC 1.1.5.8. (2) “Site” means the places where the Works are to be executed as defined in the GC 1.1.6.7 (GC 1.1.6.7: “Site” means the places where the Permanent Works are to be executed, including storage and working areas, and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.) (3) “Work-related Persons” mean the Employer’s personnel, the Engineer’s personnel, the Contractor’s Personnel and any person who is admitted entering the Site. (4) “Related Legal Entities” mean the work-related government agencies, the administrative bodies, the police station, the fire department and other entities of similar nature. (5) “Health and Safety Officer” means the Contractor’s Representative defined in the GC 1.1.2.5. (6) “Health and Safety Supervisor” means Accident Prevention Officer stipulated in the GC 6.7. (7) “Laws” means Laws stipulated in GC 1.1.6.5. (8) “OSHA Standards” means the Standards specified by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A
1.1.2. 目的 本仕様書は契約に基づき請負者が実施する全ての工事に関係する工事現場内、工事現場周辺、公道での工事関係者、及び工事により影響を受ける住民等の安全と健康の維持と事故防止のために、請負者が実施すべき安全対策の要求事項を規定する。		1.1.2 Purpose The Specification stipulates requirements for safety measures to be carried out by the Contractor under the Contract for the purpose of preventing accidents and maintaining safety and health of all work-related persons, whether on or off the Site, or on the public road, and of neighboring residents who may be affected by the Work as well.
1.1.3. 適用範囲 本仕様書は契約に基づき請負者が実施する全ての工事に適用する。		1.1.3 Scope of Application The Specification applies to all Works undertaken by the Contractor under the Contract.
1.2. 本スペックに適用する法律・基準 1.2.1. 本スペックに適用する法律 請負者は工事の実施に当り労働安全衛生に関係する当該国の法律、及び工事に関係する国の法律を遵守しなくてはならない。ただし、本仕様書及び特記仕様書の要求事項の規定が法律より厳しい規定の場合、請負者は本仕様書及び特記仕様書の規定を適用しなくてはならない。		1.2 Laws and Criteria Applicable to the Specification 1.2.1 Laws Applicable to the Specification The Contractor shall, in execution of the Works, abide the laws on occupational health and safety and construction works of the country concerned. However, the Contractor shall apply provisions of the Specification and the Special Specification if they are stricter than those by the laws.

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<p>1.2.2. 適用基準</p> <p>本仕様書が規定する適用基準の変更は原則として認められない。請負者が本仕様書で規定した基準の適用に関する提案を行う場合は、契約条件書 GC13.1 Right to Vary に従い、エンジニアのレビューと指示を受けるために提案書を提出しなくてはならない。</p>	<p>1.2.2 Criteria Applicable to the Specification</p> <p>The criteria stipulated in the Specification shall not allowed to change in principle. The Contractor shall, for proposing in respect of the application of the criteria stipulated in the Specification, submit a proposal to the Engineer for his review and instruction in accordance with the GC 13.1 “Right to Vary”.</p>
<p>1.3. 施工計画</p> <p>1.3.1. 施工計画書</p> <p>請負者は次の計画書を工事開始前もしくは作業開始前に作成しなくてはならない。</p> <p>(1) 施工計画書 (Method Statement)</p> <p>(2) 作業計画書(工種ごとの施工計画書)(Method Statement for Each Work)</p> <p>請負者は、本契約のスペックの別の場所に施工計画書と作業計画書に関する規定がある場合はその規定及び以下の規定を網羅して作成する。なお規程の優先順位は別の場所の規定を優先する。別の場所に規定がない場合は本スペックを遵守しこれらを作成する。</p>	<p>1.3 Construction Planning</p> <p>1.3.1 Method Statement</p> <p>The Contractor shall make the following construction plans prior to the commencement of the Works and each work which is a part of the Works;</p> <p>(1) Method Statement</p> <p>(2) Method Statement for Each Work</p> <p>If there are provisions concerning above Method Statements in another place of any Specifications of the Contract, the Contractor covers the provisions and the following provisions in making the Method Statements. The provisions of other places are prioritized. If there is no provision in another place, the Contractor shall comply with the Specification and create those Method Statements.</p>
<p>1.3.2. 工事内容、施工条件等の把握及び事前調査</p> <p>請負者は施工計画を作成するにあたっては、あらかじめ図面(GC1.1.1.6 に規定の Drawings)に明示された事項に対する事前調査を行い、安全確保のための施工条件等を把握しておかなければならない。</p> <p>また、施工計画の作成に先立ち、地形、地質、気象、海象等の自然特性、工事用地、支障物件、交通、周辺環境、施設管理等の立地条件について適切な調査を実施しなければならない。</p>	<p>1.3.2 Understanding Construction Details and Conditions, etc. and Conducting Preliminary Survey</p> <p>Prior to making the Method Statement, the Contractor shall conduct preliminary site survey against matters shown in the Drawings (GC 1.1.1.6 “Drawings) and shall understand the construction conditions etc. necessary for ensuring safety.</p> <p>Before preparing the Method Statement, it is necessary for the Contractor to conduct appropriate investigation on the site conditions such as topography, geology, weather, sea and other natural characteristics, site of construction, obstacle, traffic, surrounding environment, facility management etc.</p>
<p>1.3.3. 施工計画の作成</p> <p>請負者は施工計画の作成にあたって次の項目を実施しなければならない。</p> <p>(1) 施工計画は、施工条件等を十分に把握したうえで、工程、資機材、労務等の一般的事項のほか、工事の難易度を評価する項目(工事数量、地形地質、構造規模、適用工法、工期、工程、材料、用地等)を考慮し、工事の安全施工が確保されるように総合的な視点で作成する。</p> <p>また施工計画は、設計図書及び事前調査結果に基づいて検討し、施工方法、工程、安全対策、環境対策等必要な事項について立案する。</p> <p>(2) 関係機関等との協議・調整が必要となるような工事では、その協議・調整内容をよく把握し、特に工事の安全確保に留意すること。この場合、当該事項に係わる内容は、一般的に工程計画の立案に際して制約条件となるので、よく把握する。</p> <p>特に都市内工事にあっては、第三者災害防止上の安全確保に十分留意する。</p> <p>(3) 現場における組織編成及び業務分担、指揮命令系統が明確なものであり、また、災害等非常時の連絡システムも明記する。</p> <p>(4) 作業員は、必要人員を確保するとともに、技術・技能のある人員を確保する。やむを得ず不足が生じる時は、施工計画、工程、施工体制、施工機械等について、対応策を検討する。</p> <p>(5) 使用機械設備の計画・選定にあたっては、施工条件、機械の能力及び適応性、現場状況、安全面、環境面等総合的な視点で検討する。</p> <p>(6) 工事による作業場所及びその周辺への振動、騒音、水質汚濁、粉じん等を考慮した環境対策を講じる。</p>	<p>1.3.3 Preparing Method Statement</p> <p>The Contractor shall carry out the following items in preparing the Method Statement;</p> <p>(1) The Method Statement shall be made from the comprehensive point of view in order to ensure safe construction work understanding the construction conditions and taking account of the items (construction quantity, geographical geology, structure scale, applied construction method, construction schedule, process, material, land, etc.) that evaluate the degree of difficulty of construction, in addition to the general items such as schedule material, equipment and labor etc.</p> <p>In addition, the Method Statement shall be examined based on drawings, specifications and preliminary survey results and shall be planned with respect to the necessary items such as construction method, schedule, safety measures and environmental measures etc.</p> <p>(2) Attention shall be paid to ensure safety in Works that require consultation and coordination with relevant organizations etc. with understanding the contents of the consultation and coordination. In this case, the contents shall be fully understood because they will generally be constraint conditions for planning schedule. Particularly in the case of urban construction work, special attentions shall be paid to ensure safety to prevent third party accidents.</p> <p>(3) The Method Statement shall explicit the site organization, task assignment and chain of command, and the emergency contact network as well.</p> <p>(4) The necessary number of workers and workers with technical skills shall be secured. When unavoidable shortage of workers occurs, proper countermeasures shall be considered for the construction plan, schedule, construction organization and equipment etc.</p>

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<p>(7) 工程は、準備作業から工事終了まで全工期にわたって安全作業を十分考慮するとともに、気象・海象条件等を十分考慮して作成する。</p>		<p>(5) In planning and selecting the equipment to be used, the decision shall be made from a comprehensive viewpoint such as construction conditions, machine capability and adaptability, site situation, safety aspect, environmental aspect, etc.</p> <p>(6) Environmental measures shall be taken considering vibration, noise, water pollution, dust and the like to the work place and its surroundings due to the Work.</p> <p>(7) The construction schedule shall be prepared with due consideration of weather and oceanic conditions etc. while fully considering safety work throughout the whole construction period from preparation work to completion of construction.</p>																								
<p>1.3.4. 施工計画の変更等</p> <p>施工時においては、請負者は当初の施工計画に従って忠実に実施しなければならない。ただし、事前検討の条件と実際の施工条件との相違又は、新たに生じた状況等により当初の施工計画書に記載した内容に変更が生じるときは、全体状況を十分勘案してすみやかに計画書を変更し、エンジニアに提出しその承認を得なければならない。</p>		<p>1.3.4 Change of Method Statement</p> <p>The Contractor shall carry out construction works faithfully according to the initial method statement.</p> <p>However, if any change in the content described in the initial method statement occurred due to the difference between the conditions of preliminary examination and actual construction conditions, or newly occurred circumstances, the Contractor shall modify the method statement immediately paying close attention to the overall situation and shall submit it to the Engineer and obtain his approval.</p>																								
<p>1.3.5. 作業計画書の作成</p> <p>請負者は、新たな工種・工区等に着手するに先立って、当該工事に対する作業計画書を作成しエンジニアの承認を得なければならない。作業計画書は、施工条件等を十分に把握したうえで、工程、資機材、労務等の一般的事項のほか、工事に存在するリスクを分析し、工事の安全施工が確保されるように総合的な視点で作成しなければならない。</p> <p>また、作業計画は、設計図書及び事前調査結果に基づいて検討し、作業方法、工程、安全対策、環境対策等必要な事項について立案しなければならない。</p>		<p>1.3.5 Preparing Method Statement for Each Work</p> <p>The Contractor shall, prior to starting a new kind of construction / work section etc., prepare a Method Statement for Each Work and obtain approval from the Engineer.</p> <p>The Method Statement for Each Work shall be prepared comprehensively so as to ensure safety of the construction work in addition to taking account of general matters such as schedule, equipment, labor, etc., understanding the construction conditions fully and analyzing the risks existing in each work.</p> <p>In addition, the method statement for each work shall be drawn up with necessary matters such as work method, schedule, safety measures, environmental measures, etc., examining the drawings and the preliminary survey result.</p>																								
<p>1.4. 安全衛生計画書</p> <p>1.4.1. 安全衛生管理計画書の提出</p> <p>請負者は次の計画書を作成し、エンジニアのレビューのために下記の期限までに提出しなくてはならない。</p> <table border="1"> <thead> <tr> <th></th> <th>計画書</th> <th>請負者の提出期限</th> <th>エンジニアの回答期限</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>安全衛生管理全体計画書(Health and Safety Management Plan)</td> <td>1) 契約条件書 GC8.1 で規定の工事開始日から 28 日以内に提出する。 2) 現場状況の変化に応じ随時見直しを行った時、速やかに提出する。 3) 契約条件書 GC 4.1 によるエンジニアの要請があった時、速やかに提出するものとする。</td> <td>受領後 14 日以内</td> </tr> <tr> <td>2</td> <td>安全衛生計画書 (Health and Safety Plan for each work)</td> <td>1) 各工種の工事の開始前 2) 現場状況の変化に応じ随時見直しを行った時 3) 契約条件書 GC 4.1 によるエンジニアの要請があった時、速やかに提出するものとする。</td> <td>受領後 14 日以内</td> </tr> </tbody> </table> <p>安全衛生全体計画書は工事契約後比較的短期間での提出が求められるが、本計画書は請負者の安全方針を明確にすることが目的であることを鑑み、いたずらに細部にわたって計画する必要はない。</p>		計画書	請負者の提出期限	エンジニアの回答期限	1	安全衛生管理全体計画書(Health and Safety Management Plan)	1) 契約条件書 GC8.1 で規定の工事開始日から 28 日以内に提出する。 2) 現場状況の変化に応じ随時見直しを行った時、速やかに提出する。 3) 契約条件書 GC 4.1 によるエンジニアの要請があった時、速やかに提出するものとする。	受領後 14 日以内	2	安全衛生計画書 (Health and Safety Plan for each work)	1) 各工種の工事の開始前 2) 現場状況の変化に応じ随時見直しを行った時 3) 契約条件書 GC 4.1 によるエンジニアの要請があった時、速やかに提出するものとする。	受領後 14 日以内		<p>1.4 Health and Safety Plan</p> <p>1.4.1 Submission of Health and Safety Management Plan</p> <p>The Contractor shall prepare the following plans and submit to the Engineer for his review by the specified deadline.</p> <table border="1"> <thead> <tr> <th></th> <th>Health and Safety Plan</th> <th>Submission Deadline by the Contractor</th> <th>Response Deadline by the Engineer</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Health and Safety Management Plan</td> <td>1) The plan shall be submitted within 28 days from the commencement date stipulated in GC 8.1. 2) The plan shall be submitted immediately when reviewed in accordance with change of the site conditions. 3) The plan shall be submitted immediately when the Engineer requires as stipulated in GC 4.1.</td> <td>Within 14 days after receipt.</td> </tr> <tr> <td>2</td> <td>Health and Safety Plan for each work</td> <td>1) The plan shall be submitted prior to start of each work. 2) The plan shall be submitted when reviewing at any time according to changes in the site situation. 3) The plan shall be submitted immediately when the Engineer requires as stipulated in GC 4.1.</td> <td>Within 14 days after receipt.</td> </tr> </tbody> </table> <p>Although the Health and Safety Management Plan is required to be submitted in a relatively short period after the Contract, in</p>		Health and Safety Plan	Submission Deadline by the Contractor	Response Deadline by the Engineer	1	Health and Safety Management Plan	1) The plan shall be submitted within 28 days from the commencement date stipulated in GC 8.1. 2) The plan shall be submitted immediately when reviewed in accordance with change of the site conditions. 3) The plan shall be submitted immediately when the Engineer requires as stipulated in GC 4.1.	Within 14 days after receipt.	2	Health and Safety Plan for each work	1) The plan shall be submitted prior to start of each work. 2) The plan shall be submitted when reviewing at any time according to changes in the site situation. 3) The plan shall be submitted immediately when the Engineer requires as stipulated in GC 4.1.	Within 14 days after receipt.
	計画書	請負者の提出期限	エンジニアの回答期限																							
1	安全衛生管理全体計画書(Health and Safety Management Plan)	1) 契約条件書 GC8.1 で規定の工事開始日から 28 日以内に提出する。 2) 現場状況の変化に応じ随時見直しを行った時、速やかに提出する。 3) 契約条件書 GC 4.1 によるエンジニアの要請があった時、速やかに提出するものとする。	受領後 14 日以内																							
2	安全衛生計画書 (Health and Safety Plan for each work)	1) 各工種の工事の開始前 2) 現場状況の変化に応じ随時見直しを行った時 3) 契約条件書 GC 4.1 によるエンジニアの要請があった時、速やかに提出するものとする。	受領後 14 日以内																							
	Health and Safety Plan	Submission Deadline by the Contractor	Response Deadline by the Engineer																							
1	Health and Safety Management Plan	1) The plan shall be submitted within 28 days from the commencement date stipulated in GC 8.1. 2) The plan shall be submitted immediately when reviewed in accordance with change of the site conditions. 3) The plan shall be submitted immediately when the Engineer requires as stipulated in GC 4.1.	Within 14 days after receipt.																							
2	Health and Safety Plan for each work	1) The plan shall be submitted prior to start of each work. 2) The plan shall be submitted when reviewing at any time according to changes in the site situation. 3) The plan shall be submitted immediately when the Engineer requires as stipulated in GC 4.1.	Within 14 days after receipt.																							

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<p>安全衛生管理全体計画書と当該工種に関する安全衛生計画書の双方が、エンジニアに提出されエンジニアの同意を得ていることが、請負者が各工種の工事を開始できる条件の一つである。</p> <p>なお、宿舎や工事用道路建設等の準備工事の早期着手を可能にするため、請負者は上記安全衛生全体計画書とは別に、準備工事安全衛生計画書を作成し、エンジニアの承認を得ることができる。エンジニアは同計画書に対して受領後 14 日以内に回答するものとする。</p>	<p>view of its purpose of clarifying the safety policy of the Contractor, this plan does not require unnecessary detailed planning.</p> <p>Submission of both Health and Safety Management Plan and Health and Safety Plan for each work and approval by the Engineer is one of the prerequisite conditions for start of each work.</p> <p>In order to enable the early start of preparatory works such as construction of lodgings and construction roads, the Contractor may prepare a Health and Safety Plan for preparatory works separately from the above-mentioned Health and Safety Management Plan, and can obtain the approval from the Engineer. The Engineer shall respond to the plan within 14 days after receipt.</p>
<p>1.4.2. エンジニアによる計画書のレビュー</p> <p>エンジニアは請負者から提出された計画書を前項 1.4.1 に定める期限内にレビューするものとする。計画書が契約の要求事項に適合している場合、エンジニアは「Notice of No Objection」(NNO)を請負者に発出する。計画書が契約の要求事項に適合していない場合、エンジニアは「Notice of Objection with Comments」(NOC)を請負者に発出する。</p> <p>「Notice of Objection with Comments」が発出された場合、請負者はエンジニアの指摘事項に適合する計画書または提案書をすみやかに再提出するものとする。請負者はエンジニアから「Notice of No Objection」を受領しない限り関連する工事を開始することはできない。</p> <p>エンジニアが本スペックに定める期限内に回答を行わない場合、エンジニアは「Notice of No Objection」を発出したものとみなす。</p>	<p>1.4.2 Review of the Plan by the Engineer</p> <p>The Engineer shall review the plan submitted by the Contractor within the deadline prescribed in the preceding paragraph 1.4.1. If the plan meets the requirements of the Contract, the Engineer issues "Notice of NO Objection" (NNO) to the Contractor. If the plan does not meet the requirements of the Contract, the Engineer issues "Notice of Objection with Comment" (NOC) to the Contractor.</p> <p>If "Notice of Objection with Comment" is issued, the Contractor shall re-submit immediately a plan or a proposal that conforms the Engineer's comments. The Contractor shall not commence the Works unless he receives "Notice of No Objection" from the Engineer.</p> <p>If the Engineer fails to respond within the deadline stipulated in the Specification, the Engineer shall be deemed to have issued "Notice of No Objection".</p>
<p>1.4.3. 安全衛生全体計画書</p> <p>安全衛生管理全体計画書は最低限次の事項を含めるものとする。請負者は現場の進捗や状況の変化に応じて安全衛生管理全体計画書を随時改善し、エンジニアに提出しなくてはならない</p> <ol style="list-style-type: none"> (1) 工事の概要 (2) 請負者の安全衛生計画の基本方針 (3) 請負者幹部の安全衛生管理の責務 (4) 安全衛生管理要員の任命、責務、権限 (5) 安全衛生関連の法律・基準 (6) 工事の安全衛生リスクの解析手法と対策の基本方針 (7) 建設機械・器具の安全対策の基本方針 (8) 情報共有・コミュニケーションの基本方針 (9) 安全衛生教育・訓練の基本方針 (10) 安全衛生関連の個人用保護具・装置の使用や配置の基本方針 (11) 工事関係者のために実施する安全衛生対策の基本方針 (12) 公衆安全衛生対策の基本方針 (13) 工事現場内での工事関係者及び公道での請負者の要員の作業中の交通事故対策の基本方針 (14) 報告制度と実施記録の基本方針 (15) 事故・ニアミス発生報告、再発防止策策定方法 (16) 福利厚生施設 (17) 救急救護施設と医療要員計画 (18) 緊急事態対応計画 	<p>1.4.3 Health and Safety Management Plan</p> <p>The Health and Safety Management Plan shall, at least, include the following Items. The Contractor shall, from time to time, improve the Plan in accordance with the work progress and change in the site situation, and submit it to the Engineer.</p> <ol style="list-style-type: none"> (1) Outline of the Work (2) Basic policy of Contractor's health and safety plan (3) Responsibility of the Contractor's senior staff regarding health and safety management (4) Appointment, duties and authority of health and safety management personnel (5) Laws and standards related to health and safety (6) Basic policy on analysis method and measures for health and safety risks of the Works (7) Basic policy on safety measures for construction equipment and machinery (8) Basic policy on information sharing and communication (9) Basic policy on health and safety education / training (10) Basic policy on the use of personal protective equipment and arrangement of devises related to health and safety (11) Basic policy on measures to implement health and safety of the work-related persons (12) Basic policy on the public health and safety measures (13) Basic policy of measures concerning traffic accidents of work-related persons in the Site and those of the Contractor's Personnel while working at the public road (14) Basic policy on reporting system and implementation record (15) Measures for reporting on the occurrence of accidents / near misses and method of formulating prevention of recurrence. (16) Welfare facilities (17) Emergency relief facility and medical personnel plan

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<p>(19) 緊急連絡網・通信設備 (20) 作業中断基準 (21) 安全衛生管理のモニタリング、レビュー、巡視の基本方針 (22) 請負者の本社の現場の安全衛生管理への支援体制 (23) その他</p>	<p>(18) Emergency action plan (19) Emergency contact network and communication equipment (20) Criteria for suspension of work (21) Basic policy on safety and health management monitoring, review and patrol (22) Support system by the Contractor's head office for safety and health management at the Site (23) Others</p>
<p>1.4.4. リスク分析 請負者は作業計画の作成において、作業の安全衛生に関するリスク分析とリスク低減措置の検討を行わなくてはならない。 リスク分析は、例えば HSE Risk Assessment Tool and Guidance に示されるような方法、手順による。</p> <p>1) リスク分析の手順</p> <ol style="list-style-type: none"> (1) リスクの特定 (2) リスクの分析 (3) リスクの評価 (4) リスク対策の立案 <p>2) リスク低減措置の検討・実施</p> <p>リスク低減措置の検討・実施にあたっては、安全衛生対策の優先順位は以下に示す順とする。</p> <ol style="list-style-type: none"> (1) 本質的対策 (elimination e.g. removal of the hazard) (2) 代替対策 (substitution: substitute the hazard for something which is less hazardous e.g. replace a hazardous chemical with one which is not hazardous) (3) 分離 (isolation: isolate the hazard from people e.g. place a noisy piece of equipment in another location) (4) 工学的対策 (engineering e.g. guarding on machinery) (5) 管理的対策 (administrative e.g. provision of training, policies and procedures, signage) (6) 個人用保護具 (personal protective equipment) 	<p>1.4.4 Risk Analysis</p> <p>In preparing the method statement for each work, the Contractor shall conduct risk analysis on health and safety of the work concerned and study risk reduction measures.</p> <p>Risk analysis may be conducted based on methods and procedures as shown, for example, in the HSE Risk Assessment Tool and Guidance.</p> <p>1) Procedure of Risk Analysis</p> <ol style="list-style-type: none"> (1) Identify the Risks (2) Analyze the Risk (3) Evaluate the Risks (4) Treat the Risks <p>2) Study and Implementation of Risk Reduction Measures</p> <p>The order of priority for health and safety measures in studying and implementing risk reduction measures is as follows;</p> <ol style="list-style-type: none"> (1) Elimination e.g. removal of the hazard (2) Substitution: substitute the hazard for something which is less hazardous e.g. replace a hazardous chemical with one which is not hazardous (3) Isolation: isolate the hazard from people e.g. place a noisy piece of equipment in another location (4) Engineering e.g. guarding on machinery (5) Administrative e.g. provision of training, policies and procedures, signage (6) Personal Protective Equipment
<p>1.4.5. 安全衛生計画書 請負者は各作業の実施に当り、本スペックとは別途に規定する各作業の作業計画書(Method Statement for Each Work)と対となる各作業の安全衛生計画書(Health and Safety Plan for Each Work)を作成しなければならない。なお、各作業の作業計画書と安全衛生計画書は合冊または別冊での作成を可とする。 本安全衛生計画書の取扱いには以下でなくてはならない。</p> <ol style="list-style-type: none"> (1) 請負者は作業開始前に各作業の作業計画書と安全衛生計画書をエンジニアのレビューのために提出し、エンジニアの「Notice of No Objection」を受領しなくてはならない。 (2) 請負者はエンジニアから「Notice of No Objection」を受領しない限り、作業を開始することはできない。 (3) 本計画書は、現場の閲覧可能な場所に常時置くことや掲示により、請負者及び発注者の要員が見ることが出来るようにしなくてはならない。 (4) 請負者はこの安全計画書を遵守し、現場での実際の安全衛生措置を実施しなくてはならない。 <p>安全衛生計画書は次の事項を含まなくてはならない。</p> <ol style="list-style-type: none"> (1) 作業の概要と作業手順 	<p>1.4.5 Health and Safety Plan for Each Work</p> <p>In carrying out each work, the Contractor shall prepare the Health and Safety Plan for Each Work pairing with Method Statement for Each Work prescribed separately from the Specification.</p> <p>The method statement for each work and the health and safety plan for each work can be prepared in one volume or separately.</p> <p>The following points about the Specification shall be observed;</p> <ol style="list-style-type: none"> (1) The Contractor shall, prior to commencement of any work, submit the method statement for each work and the health and safety plan for each work to the Engineer for his review, and receive the Engineer's "Notice of No Objection". (2) The Contractor shall not start any work unless he received "Notice of No Objection" form the Engineer. (3) This plan shall be made available to the Contractor's and the Employer's Personnel to see at any time by placing or

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<p>(2) 安全管理体制、要員、責務と権限 (3) 作業のリスク分析と対策 (4) 現場の安全措置 (5) 要員の防護具 (6) 要員の安全教育・訓練、作業前 Tool Box Meeting (TBM) (7) 請負者の要員間の情報共有とコミュニケーション方法 (8) 安全教育・訓練、作業前 Tool Box Meeting で使用する教材 (9) 安全措置の点検・保守・巡回 (10) 安全衛生措置及び状態の巡視 (11) 緊急・救急対応 (12) その他</p> <p>安全衛生計画作成において、上記以外の項目が必要となる特殊な工事等については、本スペックの当該工事の規程に従うものとする。</p>		<p>posting it at proper places.</p> <p>(4) The Contractor shall comply with the health and safety plan and implement actual health and safety plan on the Site. The health and safety plan for each work shall include;</p> <p>(1) Outline and procedure of the work (2) Safety management organization, personnel, responsibility and authority (3) Risk analysis and countermeasures for the work (4) Safety measures on site (5) Personal protective equipment for the Contractor's Personnel (6) Safety education / training and tool box meeting to be held before starting the work for the Contractor's Personnel (7) Method of information sharing and communication among the Contractor's Personnel (8) Teaching materials for safety education / training and for the tool box meeting to be held before starting the work (9) Inspection, maintenance and patrol of safety measures (10) Patrol of the status and measures on safety and health (11) Emergency and first aid (12) Others</p> <p>Regarding special construction works requiring items other than those mentioned above in the preparation of safety and health plan for each, provisions in the relevant construction work of the Specification shall be applied.</p>
<p>1.5. 安全衛生管理体制 1.5.1. 安全衛生管理体制</p> <p>請負者は工事の施工に当り、工事関係者が一体となり工事関係者及び公衆の安全衛生の確保を図らなくてはならない。そのために請負者は次の要求事項を含む請負者の安全衛生管理体制を設立運営しなくてはならない。また、発注者が設立・運営する関係省庁との連携・連絡体制に協力しなくてはならない。</p>		<p>1.5 Health and Safety Management System 1.5.1. Health and Safety Management System</p> <p>In carrying out the Works, the Contractor shall ensure health and safety of the work-related persons and the public as well by collaboration of all work-relate persons. Therefore, the Contractor shall establish and operate Contractor's safety and health management system that includes the following requirements. In addition, the Contractor shall cooperate with the system established and operated by the Employer for cooperation and communication with related ministries.</p>
<p>1.5.2. 安全衛生管理要員の任命</p> <p>請負者は現場の安全衛生管理に責任を持つ最低限次の安全衛生管理要員を任命しなくてはならない。</p> <p>(1) 安全衛生責任者／現場代理人 (Health and Safety Officer/Project Manager) (2) 安全衛生管理者／事故防止責任者 (Health and Safety Supervisor/Accident Prevention Officer) (3) 安全衛生技術者 (Health and Safety Engineer)</p> <p>工事が複数の場所、多数の労働者がいる現場、及びシフトで工事が実施される場合、安全管理に必要な十分な数の要員を配置しなくてはならない。</p> <p>請負者は労働者の数にかかわらず、専任の安全衛生管理者を配置しなくてはならない。安全衛生管理者を補佐する安全衛生技術者については、労働者の数に応じて配置する。</p> <p>ただし、現場状況に応じて、それ以上の数の安全衛生技術者の任命をエンジニアが指示する場合、同指示に従う。上記の安全衛生管理要員のほかに、工区あるいは工種の施工責任者は現場安全衛生担当者 (Person in charge of Site Health and Safety) として工事の安全対策を実施する。すなわち、現場安全衛生担当者は職名ではなく職務の内容を表すものとする。</p>		<p>1.5.2. Appointment of Health and Safety Management Personnel</p> <p>The Contractor shall appoint at least the following safety and health management personnel responsible for the safety and health management on Site.</p> <p>(1) Health and Safety Officer (Project Manager) (2) Health and Safety Supervisor (Accident Prevention Officer) (3) Health and Safety Engineer</p> <p>In the case where construction is carried out in multiple places, or on such a site where there are a large number of workers, or where shifts are applied, the Contractor shall arrange a sufficient number of personnel for safety management. Regardless of the number of workers, the Contractor shall allocate a dedicated health and safety supervisor. The Contractor shall allocate dedicated Health and Safety Engineers who assist the health and safety supervisor depending on the number of workers. However, if the engineer instructs to appoint more health and safety engineers according to the situation of the Site, the Contractor shall follow the instructions. In addition to the above health and safety management personnel, the construction supervisor of work sections or kind of</p>

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	<p>construction will carry out safety measures for construction as the “person in charge of site health and safety”.</p> <p>In other words, “person in charge of site health and safety” represents the contents of duties, not a job title.</p>
<p>1.5.3. 安全衛生管理要員の要件、責務、権限 安全衛生管理要員の責務、権限、要件は以下である。</p> <p>1) 安全衛生責任者</p> <p>(1) 安全衛生責任者は安全衛生管理の責任者であり、請負者の代理人が兼務しなくてはならない。</p> <p>(2) 安全衛生責任者の責務は次である。</p> <p>a) 請負者の安全第一の方針の請負者要員への宣言と実施</p> <p>b) 安全衛生管理者、及び現場安全衛生担当者の業務の管理</p> <p>c) その他以下の項目に関して、安全衛生責任者は安全衛生管理者に指示し、実施の権限を委譲することができる。</p> <p>i) 安全衛生管理計画の作成、実施、評価及び改善の実施</p> <p>ii) 現場の不安全状態や請負者の要員の不安全行動の改善の実施</p> <p>iii) 事故発生時の対応と再発防止策の作成と実施</p> <p>iv) 事故やニアミスの発生時の工事中断の指示</p> <p>v) 発注者及びエンジニアとの安全管理に関する協議</p> <p>vi) 事故発生時のエンジニアへの報告と協議</p> <p>2) 安全衛生管理者</p> <p>(1) 安全衛生管理者は安全衛生責任者の指揮のもと、現場の安全及び衛生の維持と事故の防止を責務とし、安全衛生管理部門を専任で統括する。</p> <p>(2) 安全衛生管理者の責務は次である。</p> <p>a) 前項の規定により安全衛生責任者から実施権限を移譲されたすべての業務</p> <p>b) 施工計画の作成において、当該国の労働安全衛生関連の規則及び仕様書の規定に基づき、施工計画書に含まれるべき安全衛生全体計画書の作成と、施工計画書の安全衛生面の点検</p> <p>c) 安全衛生全体計画書に基づくパトロール</p> <p>d) 不安全状態と不安全行動に対する改善措置の安全衛生責任者への報告</p> <p>e) 安全衛生責任者経由での現場安全衛生担当者への改善措置指示</p> <p>f) 現場での現場安全衛生担当者への直接の改善措置指示</p> <p>g) 第三者と工事関係者の不安全な状態と不安全行動を見かけたときのエンジニアへの報告</p> <p>h) 労働者の労働管理の確認</p> <p>i) 総則に規定された各種訓練・教育の実施計画の立案と実施</p> <p>j) 安全統計の作成</p> <p>k) 当該月の活動の安全衛生責任者への報告及び GC 4.21 Progress Report (g)の報告書作成</p> <p>(3) 安全衛生責任者は、安全衛生管理者に安全及び衛生の維持と事故の防止の措置に関し、請負者、及び請負者の全要員に対して、強制力を持つ指示を与える権限を付与しなくてはならない。</p> <p>(4) 安全衛生管理者は当該国の法律で要求される安全衛生管理者としての資格を有する者、または法律上の要求資格が無い場合、5年以上の安全衛生管理の実務経験者で安全衛生に関する当該国又は他国の公的</p>	<p>1.5.3 Responsibilities, Authority and Requirements of Health and Safety Management Personnel</p> <p>Responsibilities, authority and requirements of health and safety management personnel are as follows;</p> <p>1) Health and Safety Officer</p> <p>(1) Health and safety officer is responsible for health and safety management and the Contractor’s representative shall also serve concurrently.</p> <p>(2) Responsibility of health and safety officer are as follows;</p> <p>a) Declaration and implementation of Contractor’s safety-first policy to the Contractor’s Personnel</p> <p>b) Management of the work of health and safety supervisor and personnel in charge of site health and safety</p> <p>c) With respect to the following items, the health and safety officer may instruct the safety and health supervisor and delegate the authority of implementation to him.</p> <p>i) Preparation, implementation, evaluation and improvement of health and safety management plan</p> <p>ii) Implementation of improvements of unsafe conditions at the Site and unsafe behaviors of Contractor’s Personnel</p> <p>iii) Response at the time of accident and preparation and implementation of measures to prevent recurrence</p> <p>iv) Instructions for suspension of construction at the occurrence of accident or near miss</p> <p>v) Consultation on safety management with the Employer and the Engineer</p> <p>vi) Report and consultation to the Engineer at the occurrence of accident</p> <p>2) Health and Safety Supervisor</p> <p>(1) Health and safety supervisor is responsible for maintaining health and safety at the Site and prevention of accidents under the direction of the health and safety officer and supervises the health and safety management section at full charge.</p> <p>(2) Responsibilities of health and safety supervisor are as follows;</p> <p>a) In accordance with the provisions of the preceding paragraph, all operations of which authority of implementation is transferred from the health and safety officer</p> <p>b) In preparing the method statement, preparation of the health and safety management plan to be included in said method statement based on the stipulation of the occupational health and safety related regulations and specifications of the relevant country, and inspection of safety and health aspects of the method statement</p> <p>c) Patrol based on the health and safety management plan</p> <p>d) Report on the safety improvement measures for unsafe state and unsafe behavior to the health and safety officer</p> <p>e) Instructions for remedial measures to persons in charge of site health and safety via the health and safety officer</p> <p>f) Direct instructions for remedial measures to persons in charge of site health and safety</p> <p>g) Report to the Engineer when seeing unsafe state and unsafe behavior of third party and work-related persons</p> <p>h) Confirmation of labor management for workers</p> <p>i) Planning and implementation of various training and education implementation plans prescribed in the General Rules 1.9 of the Specification</p> <p>j) Creating safety statistics</p>

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<p>な機関の講習訓練の受講証明書を有し、請負者が安全衛生管理能力を保証しエンジニアがその任命に同意した者、または特記仕様書に規定の要件を満たす者でエンジニアがその任命に同意した者とする。</p> <p>3) 安全衛生技術者</p> <p>安全衛生技術者の責務、権限は以下である。</p> <p>(1) 安全衛生管理者の指示により現場を巡回し不安全行動や不安全状態の発見に努める。</p> <p>(2) 不安全行動や不安全状態を発見した場合、当該工区の現場安全衛生担当者に状況を通知し協力して改善を実施する。</p> <p>(3) 安全衛生に関する状況を安全衛生管理者に報告し、その指示を受けて現場の安全衛生の改善を実施する。</p> <p>(4) 現場の安全衛生状況維持改善に関してエンジニアの安全衛生検査員(インスペクター)と協力して行う。</p>		<p>k) Reporting to the health and safety officer of the activity of the current month and preparing the progress report as stipulated in GC 4.21 Progress Report (g)</p> <p>(3) Health and safety officer shall give the health and safety supervisor the authority to give compulsory instructions to the Contractor and all Contractor's Personnel regarding measures to maintain safety and health and prevent accidents.</p> <p>(4) A health and safety supervisor shall be a person who is qualified as a health and safety supervisor as required by the law of the country concerned or who has work experience of health and safety management for 5 years or more, in the absence of legal requirements, a person who has a certificate of attendance of training of a public institution of the country or another country, a person who is guaranteed to have the health and safety management ability by the Contractor and agreed with the appointment by the Engineer, or a person who meets the requirements specified in the special specifications document and is agreed for the appointment by the Engineer.</p> <p>3) Health and Safety Engineer</p> <p>Health and Safety Engineer shall;</p> <p>(1) patrol the site with instructions of the health and safety supervisor and try to find unsafe behavior and unsafe state.</p> <p>(2) notify, if any unsafe behavior or unsafe condition is found, the person in charge of site health and safety for the work section concerned and cooperate with him to make improvements.</p> <p>(3) report the status of on-site health and safety to the health and safety supervisor and implement improvement of site health and safety based on instructions of the health and safety supervisor.</p> <p>(4) carry out maintenance and improvement of on-site health and safety status in cooperation with the Engineer's health and safety inspectors.</p>
<p>1.6. 安全衛生管理のための会議体</p> <p>1.6.1. 安全管理措置の周知徹底のための会議体</p> <p>請負者は次の安全管理措置の周知徹底のため、会議体を設置し運営しなくてはならない。</p> <p>1) 周知徹底すべき事項</p> <p>請負者が安全衛生のために請負者及び下請けの要員へ周知すべき事項は以下である。</p> <p>(1) 請負者の当該工事の内容、設計条件、施工条件、施工工法、留意する事項</p> <p>(2) 請負者の安全衛生計画、現場の安全衛生リスクと措置</p> <p>(3) 請負者及び下請けの要員、材料支給者や運転手等が厳守すべき安全衛生上のルール</p> <p>(4) 安全点検、安全訓練、緊急通報システム、作業員の適正配置等</p> <p>2) 周知徹底のための会議体の設置</p> <p>請負者は上記の周知徹底のために、次を含む会議体を設置しなくてはならない。</p> <p>(1) 請負者・下請け・その他の工事関係者を含む安全協議会</p> <p>(2) 労働者のための週例会議等</p> <p>安全協議会の開催頻度は月1回以上とする。</p> <p>3) 会議体の計画、内容、運営方法等の報告</p> <p>請負者は会議体の計画、内容、運営方法等を、安全衛生管理全体計画書に記載し、エンジニアに提出しなくてはならない。また、運営状況を月報に記載し報告しなくてはならない。</p>		<p>1.6 Conference Body for Health and Safety Management</p> <p>1.6.1 Conference Body for Full Dissemination of Safety Management Measures</p> <p>The Contractor shall establish and operate conference bodies for full dissemination of safety management measures.</p> <p>1) Items to Disseminate</p> <p>The items to be notified to the Contractor's and subcontractor's personnel for health and safety by the Contractor are as follows;</p> <p>(1) Contents of the Work, design conditions, construction conditions, construction method, and matter to be noted</p> <p>(2) Contractor's health and safety plan, risks existing in the Site and measures against them</p> <p>(3) Health and safety rules to be strictly observed by Contractor's and subcontractor's personnel, materials suppliers and drivers etc.</p> <p>(4) Safety inspection, safety training, emergency notification system, proper placement of workers, etc.</p> <p>2) Establishing Conference Bodies for Full Dissemination</p> <p>The Contractor shall establish following conference bodies, but not limited, for full dissemination prescribed above</p> <p>(1) Safety council consists of the Contractor, subcontractors and other stakeholders</p> <p>(2) Weekly Meeting for workers</p> <p>The safety council shall be held once a month or more.</p> <p>3) Report on Planning, Content, Operation Method etc. of Conference Bodies</p> <p>The Contractor shall describe the plan, content, operation method, etc. of the conference body in the health and safety management plan, and submit it to the Engineer. Also, the Contractor shall describe and report the operation</p>

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<p>1.6.2. エンジニア主催の月例安全会議</p> <p>エンジニアは発注者の意向を受けて、発注者及び請負者、必要に応じ関係省庁が出席する月例の安全会議を主催する。会議の議題は現場の安全衛生に関する課題や問題点、協議必要な事項等である。請負者は会議に参加し、会議で指摘された安全措置事項に速やかに対応し、エンジニアへ対応状況を書面で報告しなくてはならない。</p>	<p>situation by the monthly report.</p> <p>1.6.2 Monthly Safety Conference Organized by the Engineer</p> <p>Based on the intention of the Employer, the Engineer organizes a monthly safety conference where the Employer and the Contractor including relevant ministries and agencies attend if necessary. The agenda of the conference is issues and problems concerning site health and safety, matters requiring consultation, etc. The Contractor shall participate in the conference, respond promptly to the safety measures pointed out at the conference, and report the corresponding situation to the Engineer in writing.</p>
<p>1.6.3. エンジニア主催の安全衛生調整会議</p> <p>エンジニアは請負者その他の請負者の同一場所・同一時間での工事の実施がある場合は、この工事に伴う危険を回避するために、発注者の意向を受けて必要に応じ安全衛生調整会議を開催する。</p> <p>会議の議題は現場の安全衛生に関する課題や問題点、協議必要な事項等である。請負者は会議に参加し、会議での決議事項や指示事項に速やかに対応し、エンジニアに報告しなくてはならない。また、議題には必要な場合には警察、消防署ほかの関係団体との調整事項を含むものとする。</p>	<p>1.6.3 Safety Coordination Conference Organized by the Engineer</p> <p>In case the Contractor and other contractors carry out construction works at the same place and the same time, the Engineer organizes the safety coordination conference, based on the intention of the Employer, in order to avoid the risks which may arise from the situation.</p> <p>The agenda of the conference is issues and problems concerning on-site health and safety, matters requiring consultation, etc. The Contractor shall participate in the conference, promptly respond to resolutions and instructions at the conference, and report it to the Engineer. The agenda shall also include coordination with police, fire department and other related bodies, if necessary.</p>
<p>1.7. 労働者の適正配置</p> <p>請負者は以下の項目を考慮し労働者を工事現場に適正に配置しなくてはならない。安全衛生管理者は労働者の配置を記録し工事終了まで保管する。エンジニアはこの記録を随時閲覧できるものとする。</p> <p>(1) 契約条件書の GC 6.9 Contractor’s Personnel、6.10 Records of Contractor’s Personnel and Equipment、6.11 Disorderly Conduct、6.20 Forced Labour、6.21 Child Labour、6.22 Employment Records of Worker の規定</p> <p>(2) 未熟練者や 18 歳未満の年少者、高齢者の作業内容、作業場所の危険等</p> <p>(3) 労働者の業務経験、能力等の個人差</p> <p>(4) 労働者の健康状態、毎日の作業前の健康状態</p> <p>(5) 労働者の過重労働・疲労の蓄積</p> <p>なお、健康状態に関する書類(既往歴と健康診断結果等)は、当該国における個人情報保護に関する法令を遵守し保管しなければならない。</p>	<p>1.7 Proper Placement of Workers</p> <p>The Contractor shall place workers properly at the Site taking account of the followings.</p> <p>The safety and health supervisor shall record the placement of workers and keeps it until the completion of the Work. The Engineer shall be able to view the record from time to time.</p> <p>(1) The provisions stipulated in GC 6.9 Contractor’s Personnel, 6.10 Records of Contractor’s Personnel and Equipment, 6.11 Disorderly Conduct, 6.20 Forced Labour, .21 Child Labour, 6.22 Employment Records of Worker</p> <p>(2) Inexperienced persons, young people under 18 years of age, work for elderly workers, hazardous work place etc.</p> <p>(3) Individual differences of workers such as work experience and ability etc.</p> <p>(4) Worker's health condition and health status before starting daily work</p> <p>(5) Excessive labor and accumulation of fatigue of workers</p> <p>Documents related to health status (past medical history, medical examination result, etc.) shall be kept in compliance with the laws concerning protection of personal information in the relevant country.</p>
<p>1.8. 安全管理活動</p> <p>請負者は日々の工事の作業における各種の事故を、未然に防止するために次に示す方法等を含む安全管理活動を実施しなくてはならない。</p> <p>(1) 工事関係者の作業事前打合せ、着手前打合せ、安全工程打合せ等</p> <p>(2) 全体朝礼/作業前会議/Tool Box Meeting (全体的指示・個別作業の具体的指示・安全確認・伝達事項等)</p> <p>(3) 5S活動(整理・整頓・清掃・清潔・躰)</p> <p>(4) 作業場所での労働者の危険察知能力向上教育訓練</p> <p>(5) 安全衛生要員による現場の巡視の頻度は原則以下の通りとする。(夜間・休日を含む)</p> <p>a) 安全衛生責任者: 週 1 回</p> <p>b) 安全衛生管理者: 毎日</p> <p>c) 安全衛生技術者: 毎日</p> <p>ただし、鉄道のように工事延長が非常に長い工事等の場合においては、上記原則は適用しないものとし、そ</p>	<p>1.8 Safety Management Activities</p> <p>The Contractor shall implement safety management activities including the following items to prevent various accidents in daily construction work.</p> <p>(1) Pre-work meetings, pre-launch meetings, safety schedule meetings etc.by work-related persons</p> <p>(2) Overall morning assembly, pre-work conference / tool box meeting (overall instructions, specific instructions for individual work, safety confirmation, matters to transmit etc.)</p> <p>(3) 5S campaign (neatness, orderliness, cleanliness, cleanness, discipline)</p> <p>(4) Worker’s risk perception skill improvement training at work place</p> <p>(5) The frequency of patrolling on-site by health and safety personnel is, in principle, as follows; (Including nighttime and holidays)</p> <p>a) Health and Safety Officer: once a week</p> <p>b) Health and Safety Supervisor: every day</p>

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<p>の現場の実情に合わせた頻度で出来るだけ多くの巡視をするものとする。</p> <p>(6) 月例の安全管理活動予定表の作成、請負者内の配布、エンジニアへの提出、及び活動状況の月報への記載</p> <p>(7) 事故防止のための安全衛生ルールの作成、周知と厳守の徹底</p> <p>請負者は事故防止のために工事現場用の安全衛生ルールを作成し、工事関係者への周知と工事関係者の安全衛生ルールの厳守を徹底しなくてはならない。ルールは次の事故防止事項を含み、全ての作業での事故防止のためのルールを作成しなくてはならない。</p> <p>a) 安全指示・作業手順の厳守、独断作業の禁止</p> <p>b) 個人用保護具の着用(安全帽、安全帯、安全靴等)及び適切な作業着の着用</p> <p>c) 危険無視による墜落防止(足場から身を乗出している作業、近道・省略行動等)</p> <p>d) 墜落・転落リスクのある場所の安全確保</p> <p>e) 5S活動(整理・整頓・清掃・清潔・躰)</p> <p>f) 一人作業の禁止</p> <p>g) 上下作業の禁止</p>		<p>c) Health and Safety Engineer: every day</p> <p>However, in the case of construction work where the site is very long like a railroad construction, the above principles shall not be applied, and patrol shall be conducted frequently as practically as possible in accordance with the actual situation of the site.</p> <p>(6) Creation of monthly safety management activity schedule, distribution within the Contractor's Personnel, submission to the Engineer, and description in the monthly report of activity status</p> <p>(7) Creation of health and safety rules to prevent accidents, dissemination and strict observance of the rules</p> <p>To prevent accidents, the Contractor shall prepare health and safety rules of the construction site, disseminate them to those who are involved in construction and make them strictly observe the rules. The rules shall be made to prevent accidents in all work including following accident prevention items.</p> <p>a) Strict observance of safety instructions and work procedures, prohibition of an arbitrary decided work</p> <p>b) Wear personal protective equipment (safety helmet, safety belt, safety shoes etc.) and suitable work clothes</p> <p>c) Prevent falls due to dangerous ignorance of hazard (work by leaning forward from the platform, shortcuts / omission behaviors, etc.)</p> <p>d) Securing the safety at places with risk of falling</p> <p>e) 5S campaign (neatness, orderliness, cleanliness, cleanness, discipline)</p> <p>f) Prohibition of independent work</p> <p>g) Prohibition of vertical operation</p>
<p>1.9. 安全衛生教育訓練</p> <p>1) 教育訓練の実施</p> <p>請負者は当該国の法律を遵守し、次の時期に行う教育訓練を含み、安全衛生管理者主導の下、教育訓練を有資格者に行わせなくてはならない。</p> <p>なお、この労働者への教育・訓練は就業時間内に行わなくてはならない。また、教育・訓練に必要な費用は請負者が負担しなくてはならない。</p> <p>(1) 請負者の要員の新規入場時</p> <p>(2) 労働者の作業内容の変更時</p> <p>(3) 危険又は有害な業務への労働者の配置時</p> <p>次の業務の従事者を対象とする。</p> <p>i) クレーン運転業務</p> <p>ii) 移動式クレーン運転業務</p> <p>iii) アーク溶接機を用いて行う金属の溶接、溶断等の業務</p> <p>iv) フォークリフト運転業務</p> <p>v) 車両系建設機械(整地・運搬・積込み用及び掘削用)運転業務</p> <p>vi) 車両系建設機械(基礎工事用)運転業務</p> <p>vii) ローラー運転業務</p> <p>viii) 有機溶剤を使用する業務</p> <p>ix) 玉掛業務</p> <p>x) 特記仕様書で規定の業務</p>		<p>1.9 Health and Safety Education / Training</p> <p>1) Carrying out of Education / Training</p> <p>The Contractor shall make the qualified person conduct education and training complying with the law of the country concerned, under the initiative of the health and safety supervisor including education and training at the specific periods listed below.</p> <p>Education and training for worker shall be done within the working hours. In addition, the costs necessary for education and training shall be borne by the Contractor.</p> <p>(1) At the time of new entrance of the Contractor personnel</p> <p>(2) When changing work contents of workers</p> <p>(3) When arranging workers to the following dangerous or harmful work</p> <p>i) Crane operation</p> <p>ii) Mobile crane operation</p> <p>iii) Welding and cutting using arc welding machine</p> <p>iv) Fork lift operation</p> <p>v) Vehicle construction equipment operation (for leveling, transportation, loading and excavating)</p> <p>vi) Vehicle construction equipment operation (for foundation work)</p> <p>vii) Roller operation</p> <p>viii) Work using organic solvent</p> <p>ix) Sling work</p> <p>x) Works stipulated in the special condition</p>

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<p>(4) 作業主任者任命時</p> <p>2) 請負者の要員の新規入場時及び労働者の作業内容変更時の教育</p> <p>請負者は請負者の要員の新規入場時、及び労働者の作業内容を変更したときは、当該請負者の要員及び労働者に対し、遅滞なく、次の事項のうち請負者の要員及び労働者が従事する業務に関する安全又は衛生のため必要な事項について、教育を行わなければならない。</p> <p>教育者は安全衛生管理者、及び必要に応じ又は有害性に関する専門家とする。</p> <p>a) 請負者の監督制度、指示系統と内容、情報伝達、コミュニケーション方法に関すること</p> <p>b) 機械等、原材料等の危険性又は有害性及びこれらの取扱い方法に関すること</p> <p>c) 安全装置、有害物抑制装置又は保護具の性能及びこれらの取扱い方法に関すること</p> <p>d) 作業手順に関すること</p> <p>e) 作業開始時の点検に関すること</p> <p>f) 当該業務に関して発生するおそれのある疾病の原因及び予防に関すること</p> <p>g) 整理、整頓、清潔の保持に関すること</p> <p>h) 事故時等における応急措置及び退避に関すること</p> <p>i) その他、当該業務に関する安全又は衛生のために必要な事項</p> <p>なお、教育事項の全部又は一部に関し十分な知識及び技能を有していると認められる労働者については、当該事項についての教育を省略することができる。</p>		<p>(4) When the operation chief is appointed</p> <p>2) Education at the Time of New Entrance of the Contractor Personnel and Change of Work Content of Workers</p> <p>When the Contractor's Personnel newly enter the Site or changes to the work content of the worker are made, the Contractor shall conduct education on matters which are listed below and are necessary for health or safety related to the work they engaged in. Trainer shall be the health and safety supervisor, and, if necessary, experts on risks and hazards.</p> <p>a) Concerning the supervisor system of the Contractor, the instruction system and contents, information transmission, communication method</p> <p>b) Concerning risks or hazards of equipment and raw materials etc. and their handling methods</p> <p>c) Concerning performance of the safety device, the harmful substance suppressing device or the protective device and handling method thereof</p> <p>d) Concerning work procedures</p> <p>e) Concerning inspection at start of the work</p> <p>f) Concerning the cause and prevention of diseases that may occur with respect to the work concerned</p> <p>g) Concerning maintenance of neatness, orderliness, cleanness</p> <p>h) Concerning emergency measures and evacuation at the time of accident etc.</p> <p>i) In addition, other necessary matters for health or safety with respect to said work</p> <p>As to workers who are deemed to have sufficient knowledge and skills regarding all or a part of educational matters, education on such matters can be omitted.</p>																																																						
<p>3) 危険又は有害な業務への労働者の配置時</p> <p>危険又は有害な業務に労働者をつかせるときは、当該労働者に対し、その従事する業務に関する安全又は衛生のための特別教育を行わなければならない。</p> <p>請負者は、以下の事例を参考として特別教育の教育科目及び教育時間を決定しなくてはならない。請負者は教育科目及び教育時間を、エンジニアにレビューのために教育の開始前に提出しなくてはならない。</p> <p>a) 事例(移動式クレーン運転士特別教育)</p> <table border="1"> <thead> <tr> <th>科目</th> <th>範囲</th> <th>時間</th> </tr> </thead> <tbody> <tr> <td>1 最近の移動式クレーンと安全装置</td> <td>構造と制御機構、安全装置等</td> <td>2.0</td> </tr> <tr> <td>2 移動式クレーンの取扱いと保守管理</td> <td>操作方法、作業計画、点検整備</td> <td>2.5</td> </tr> <tr> <td>3 災害事例及び関係法令</td> <td>災害事例とその防止対策</td> <td>1.5</td> </tr> <tr> <td>合計</td> <td></td> <td>6.0</td> </tr> </tbody> </table> <p>b) 事例(アーク溶接等の業務に係る特別教育)</p> <table border="1"> <thead> <tr> <th>科目</th> <th>範囲</th> <th>時間</th> </tr> </thead> <tbody> <tr> <td>1.アーク溶接等に関する知識</td> <td>アーク溶接等の基礎理論、電気に関する基礎知識</td> <td>1.0</td> </tr> <tr> <td>2.アーク溶接装置に関する基礎知識</td> <td>直流アーク溶接機、交流アーク溶接機、交流アーク溶接機用自動電撃防止装置、溶接棒等及び溶接棒等のホルダー、配線</td> <td>3.0</td> </tr> <tr> <td>3.アーク溶接等の作業の方法に関する知識</td> <td>作業前の点検整備、溶接、溶断等の方法、溶接部の点検、作業後の処置、災害防止</td> <td>6.0</td> </tr> </tbody> </table>	科目	範囲	時間	1 最近の移動式クレーンと安全装置	構造と制御機構、安全装置等	2.0	2 移動式クレーンの取扱いと保守管理	操作方法、作業計画、点検整備	2.5	3 災害事例及び関係法令	災害事例とその防止対策	1.5	合計		6.0	科目	範囲	時間	1.アーク溶接等に関する知識	アーク溶接等の基礎理論、電気に関する基礎知識	1.0	2.アーク溶接装置に関する基礎知識	直流アーク溶接機、交流アーク溶接機、交流アーク溶接機用自動電撃防止装置、溶接棒等及び溶接棒等のホルダー、配線	3.0	3.アーク溶接等の作業の方法に関する知識	作業前の点検整備、溶接、溶断等の方法、溶接部の点検、作業後の処置、災害防止	6.0		<p>3) When Arranging Workers to Dangerous or Harmful Work</p> <p>When assigning workers on dangerous or harmful operations, special education for health or safety concerning the work engaged in shall be given to the said workers.</p> <p>The Contractor shall determine the education subjects and education time of special education with reference to the following cases. The Contractor shall submit education subjects and education time to the Engineer for review before conducting education.</p> <p>a) Mobile crane operator special education (Example)</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Contents</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>1 Recent mobile cranes and safety equipment</td> <td>Structure and control mechanism, safety devise etc.</td> <td>2.0</td> </tr> <tr> <td>2 Handling and maintenance of mobile cranes</td> <td>Operation method, work plan, inspection and maintenance</td> <td>2.5</td> </tr> <tr> <td>3 Accident cases and related laws and regulations</td> <td>Accident cases and prevention measures</td> <td>1.5</td> </tr> <tr> <td>Total</td> <td></td> <td>6.0</td> </tr> </tbody> </table> <p>b) Arc welding special education (Example)</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Contents</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>1. Knowledge of arc welding</td> <td>Basic theory of arc welding, basic knowledge on electricity</td> <td>1.0</td> </tr> <tr> <td>2. Basic knowledge on arc welding equipment</td> <td>DC arc welding machine, AC arc welding machine, automatic electric shock prevention device for AC arc welding machine, welding rod, rod holder, wiring</td> <td>3.0</td> </tr> <tr> <td>3. Knowledge on work methods of arc welding</td> <td>Inspection and maintenance before welding, methods such as welding,</td> <td>6.0</td> </tr> </tbody> </table>	Subject	Contents	Hours	1 Recent mobile cranes and safety equipment	Structure and control mechanism, safety devise etc.	2.0	2 Handling and maintenance of mobile cranes	Operation method, work plan, inspection and maintenance	2.5	3 Accident cases and related laws and regulations	Accident cases and prevention measures	1.5	Total		6.0	Subject	Contents	Hours	1. Knowledge of arc welding	Basic theory of arc welding, basic knowledge on electricity	1.0	2. Basic knowledge on arc welding equipment	DC arc welding machine, AC arc welding machine, automatic electric shock prevention device for AC arc welding machine, welding rod, rod holder, wiring	3.0	3. Knowledge on work methods of arc welding	Inspection and maintenance before welding, methods such as welding,	6.0
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和文(案)		
4. 関係法令	規則の関係条項	1.0
合計		11.0
<p>なお、当該業務に関し同国公的機関が発行する資格の保持者、あるいは当該国又は他国の公的機関が実施する教育訓練の受講終了者等で、特別教育の項目の全部又は一部について十分な知識及び技能を有していると認められる労働者については、当該項目についての特別教育を省略することができる。</p>		
4) 作業主任者任命時		
<p>請負者は、労働者を本スペースで規定する作業主任者として任命するときは、当該労働者に対しその従事する作業に関する安全及び衛生を含む技能講習を行わなければならない。</p> <p>請負者は、以下の事例を参考として技能講習の教育科目及び教育時間を決定しなくてはならない。請負者は教育科目及び教育時間を、エンジニアにレビューのために教育の開始前に提出しなくてはならない。</p>		
a) 事例（足場の組立て等作業主任者技能講習）		
科目		時間
1.足場の組立、解体、変更等に関する知識		7.0
2.工事用設備、機械、器具、作業環境等に関する知識		3.0
3.作業員に対する教育等に関する知識		1.5
4.関係法令		1.5
5.修了試験		1.0
合計		14.0
<p>当技能講習の受講者は、以下の経験または学歴と経験を有する者とする。</p>		
i) 足場の組立て、解体又は変更に関する作業に三年以上従事した経験を有する者		
ii) 学校教育法による大学、高等専門学校、高等学校又は中等教育学校において土木、建築又は造船に関する学科を専攻して卒業した者、又はこれと同等以上の学力を有すると認められる者で、その後二年以上足場の組立て、解体又は変更に関する作業に従事した経験を有する者		
b) 事例（地山の掘削及び土止め支保工作業主任者技能講習）		
科目		時間
1.地山の掘削及び土止め支保工作業に関する知識		10.5
2.工事用設備、機械、器具、作業環境等に関する知識		3.5
3.作業員に対する教育等に関する知識		1.5
4.関係法令		1.5
5.修了試験		1.0
合計		18.0
<p>当技能講習の受講者は、以下の経験または学歴と経験を有する者とする。</p>		
i) 地山の掘削の作業又は土止め支保工の切りばり若しくは腹おこしの取付け若しくは取りはずしに関する作業に三年以上従事した経験を有する者		
ii) 大学、高等専門学校、高等学校又は中等教育学校において土木、建築又は農業土木に関する学科を専攻して卒業した者、又はこれと同等以上の学力を有すると認められる者で、その後二年以上地山の掘削の作業又は土止め支保工の切りばり若しくは腹おこしの取付け若しくは取りはずしに関する作業に従事した経験を有する者		
<p>なお、当該作業に関し同国公的機関が発行する資格の保持者、あるいは当該国又は他国の公的機関が実施する講習の受講終了者等で、技能講習の項目の全部又は一部について十分な知識及び技能を有していると認められる労働者については、当該項目についての技能講習を省略することができる。</p>		
5) 実施訓練及び実地訓練の実施		

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	fusing, etc., inspection of welds, treatment after work, accident prevention	
4. Applicable laws and regulations	Relation clause of regulations	1.0
Total		11.0
<p>A person holding a qualification issued by a public institution of the country or a person who has finished education and training conducted by a public institution of the country or another country, when deemed to have sufficient knowledge and skills for the whole or a part of items of special education, special education on the items can be omitted.</p>		
4) When the operation chief is appointed		
<p>When the Contractor appoints a worker as an operation chief prescribed in the Specification, a technical lecture concerning the work to be engaged in including health and safety shall be given to the worker.</p> <p>The Contractor shall determine the education subjects and education time of special education with reference to the following cases. The Contractor shall submit education subjects and education time to the Engineer for review before conducting education.</p>		
a) Operation chief skill training for assembly of scaffolds etc. (Example)		
Subject		Hours
1. Knowledge of assembly, disassembly, modification etc. of the scaffolding		7.0
2. Knowledge of construction equipment, machinery, equipment, work environment etc.		3.0
3. Knowledge of education etc. to workers		1.5
4. Applicable laws and regulations		1.5
5. Completion test		1.0
Total		14.0
<p>The trainee of this technical training course shall have the following experience or educational background and experience.</p>		
i) Those who have engaged in work related to assembly, disassembly or change of the scaffold for three years or more		
ii) Those who graduated from university, college of technical school, high school, or secondary school by majoring in civil engineering, building or shipbuilding courses and is recognized to have equal or better academic ability and has experience of engaging in work related to assembly, disassembly or change of scaffold for two years or more.		
b) Operation chief skill training for excavation and shoring (Example)		
Subject		Hours
1. Knowledge of excavation and shoring work		10.5
2. Knowledge of construction equipment, machinery, apparatus, work environment etc.		3.5
3. Knowledge of education etc. to workers		1.5
4. Applicable laws and regulations		1.5
5. Completion test		1.0
Total		18.0
<p>The trainee of this technical training course shall have the following experience or educational background and experience.</p>		
i) Those who have engaged in work related to excavation of the ground or work related to installation or detachment of shore strut or waling work for three years or more.		
ii) Those who graduated from university, college of technical school, high school, or secondary school by majoring in		

和文(案)	英文(案)
<p>教育の実施時に、個人用保護具の着脱や墜落防止などの実施訓練及び実地訓練も取り入れなければならない。</p> <p>6) 教育訓練の教育担当者 教育訓練の教育担当者は当該国の法律に基づく教育資格を有する請負者の要員または外部講師、規則が無い場合は請負者の安全管理要員や請負者が教育の資格があると認めた実務経験者とする。</p> <p>7) 教育訓練記録 教育訓練を行なったときは、受講者、科目等の記録を作成して保存し、エンジニアの要求のあるときは閲覧に応じなければならない。この記録は当該国の法律で規定する保存期間、またはエンジニアが要求する合理的な期限まで保存しなくてはならない。</p>	<p>civil engineering, building or agricultural engineering courses and is recognized to have equal or better academic ability and has experience of engaging in work related to installation or detachment of shore strut or waling work for two years or more.</p> <p>A person holding a qualification issued by a public institution of the country or a person who has finished education and training conducted by a public institution of the country or another country, when deemed to have sufficient knowledge and skills for the whole or a part of items of special education, special education on the items can be omitted.</p> <p>5) Implementation Training and Practical Training Implementation training and practical training such as putting and detaching of personal protective equipment and prevention of falling shall be also taken into consideration when education is implemented.</p> <p>6) Trainer for Education and Training A person in charge of education and training shall be Contractor's Personnel or external lecturer who is qualified under the laws of the country concerned. In the case of absence of such rules, lecturer / trainer shall be one who is recognized as eligible for education by the Contractor or the Contractor's safety management personnel.</p> <p>7) Record of Education and Training When conducting education and training, it is necessary to prepare and keep records of participants, subjects, etc. and respond to inspections when requested by the Engineer. The record shall be kept until the retention period prescribed by the law of the country concerned or reasonable period of time required by the Engineer.</p>
<p>1.10. 緊急事態対応計画及び緊急通報体制</p> <p>工事中に起きる事故、事件、発病等の緊急事態に迅速に適切に対応するために、緊急事態対応計画の作成、及び緊急通報体制の設立を実施し、計画を工事関係者に周知徹底しなくてはならない。また緊急事態対応計画に基づく訓練を行わなくてはならない。</p> <p>1) 緊急事態対応計画 緊急事態対応計画では次の措置を行わなくてはならない。</p> <p>(1) 現場の状況の変化に応じ迅速に変更改定する。</p> <p>(2) 計画は工事関係者が閲覧できる場所に置くことや掲示板等に掲示する。</p> <p>(3) 安全衛生管理全体計画書の一部としてエンジニアに提出し、変更改定毎にエンジニアに提出しなくてはならない。</p> <p>(4) 本計画に基づき、計画の実施訓練及び実地訓練を半年毎に実行しなくてはならない。</p> <p>計画は次の事項を最低限記載しなくてはならない。</p> <p>a) 想定される緊急事態の種類</p> <p>b) 緊急通報体制</p> <p>c) 緊急連絡網</p> <p>d) 緊急事態対応具体策</p> <p>2) 緊急通報体制 緊急時における緊急通報体制の構築では、通報方法の相互確認等を明確にしなくてはならない。緊急時の通報体制には次を含まなくてはならない。</p> <p>a) 事業関係者: エンジニア (エンジニアは発注者及び JICA へ報告)</p> <p>b) 関係省庁: 特記仕様書に記載の政府省庁、行政機関、警察署や消防署等の関係省庁</p>	<p>1.10 Emergency Response Plan and Emergency Reporting System</p> <p>In order to respond promptly and appropriately to emergency situations such as accidents, incidents and diseases that occurred during construction, the Contractor shall prepare emergency response plan and establish emergency reporting system. The plan shall be thoroughly disseminated to those involved in the construction. In addition, the Contractor shall conduct training based on the emergency response plan.</p> <p>1) Emergency Response Plan With regard to the emergency response plan, the following measures shall be taken;</p> <p>(1) The plan shall be changed and revised promptly in response to changes in the situation at the Site.</p> <p>(2) The plan shall be made available to the work-related persons to see at any time by putting or posting it at a proper place.</p> <p>(3) The plan shall be submitted to the Engineer as part of the health and safety management plan and submitted to the Engineer for every change and revise.</p> <p>(4) Based on the plan, implementation training and practical training of the plan shall be conducted every six months.</p> <p>The plan shall list at least the following items;</p> <p>a) Types of anticipated emergency</p> <p>b) Emergency reporting system</p> <p>c) Emergency contact network</p> <p>d) Specific measures for emergency response</p> <p>2) Emergency Reporting System In constructing an emergency reporting system, it is necessary to clarify mutual confirmation of reporting methods etc. The emergency reporting system shall include the following;</p> <p>a) Work-related entities: the Engineer (the Engineer shall report to the Employer and JICA)</p>

和文(案)		英文(案)
<p>c) 請負者関係者:本社、現場、下請け、資材供給者等 d) 当該事業の他の請負者</p> <p>緊急通報体制に関し次の措置を行わなくてはならない。</p> <p>(1) 通報責任者を指定する。 (2) 緊急連絡表を作成し、関係連絡先、担当者及び電話番号を記入し、事務所、詰所、現場等の見やすい場所に標示する。</p> <p>3) 緊急事態対応訓練</p> <p>緊急事態対応計画に基づき、緊急事態対応訓練を次に行わなくてはならない。</p> <p>(1) 半年毎に行う。 (2) 訓練計画を作成し、エンジニアに提出する。 (3) 訓練結果に基づき、緊急事態対応計画の改善を行う。</p> <p>4) 緊急時の対応</p> <p>請負者は施工中災害が発生したとき、もしくは災害の発生が予想される場合には、直ちに作業を中止するとともに、作業員を退避させ、必要な情報連絡を行い、安全対策を講じる等状況に即した適切な措置を行わなくてはならない。</p>		<p>b) Related legal entities: government ministries and agencies listed in the special specifications, and related ministries such as administrative agencies, police stations and fire departments etc. c) The Contractor: head office, site, subcontractors, material suppliers etc. d) Other contractors of the Project</p> <p>The following measures must be taken regarding the emergency reporting system</p> <p>(1) Designate the person responsible for reporting. (2) Create an emergency contact sheet, fill in the relevant contact information, person in charge and telephone number, and put or post it at places that are easy to see such as office, guardroom, site and so on.</p> <p>3) Emergency Response Training</p> <p>The Contractor shall conduct emergency response training based on the emergency response plan as follows;</p> <p>(1) The training shall be conducted every six months. (2) Training plan shall be prepared and submitted to the Engineer. (3) Improvement of the emergency response plan shall be made based on the training result.</p> <p>4) Response to an Emergency</p> <p>When an accident / disaster occurs during construction or when an imminent disaster is expected to occur, the Contractor shall immediately stop the operation and take appropriate measures such as having the workers evacuate, communicating necessary information, taking safety measures, etc.</p>
<p>1.11. 救急救護施設と医療要員</p> <p>請負者は、現場での工事関係者のための救急救護施設や用具、医療要員、救急車等の配置・設置等については、特記仕様書の規定に従わなければならない。</p>		<p>1.11 Emergency Relief Facilities and Medical Personnel</p> <p>The Contractor shall comply with the provisions of the Special Specifications concerning the placement and installation of emergency relief facilities, equipment, medical personnel, ambulance, etc. for work-related persons at the Site.</p>
<p>1.12. 災害防止のための工事の中断</p> <p>請負者は工事中及び工事区域内での労働災害や自然現象による工事に関係する災害の発生防止のため、次の措置をおこなわなくてはならない。</p> <p>(1) 請負者は、本仕様書 (GC のこと?) 及び特記仕様書で規定の工事の中断基準以外の請負者の中断基準、中断判断者、通知方法、避難方法等を安全衛生管理全体計画書に記載し、エンジニアに提出する。 (2) 中断基準・退避方法は現場内及び事務所に掲示し、工事関係者に周知徹底する。 (3) 中断を判断するための観測機器の配置や観測、情報収集手段の確保等を常時行う。 (4) 工事中及び工事区域内で労働災害や自然災害の発生が予想される場合には、直ちに作業を中止するとともに、工事関係者を退避させ、必要な情報連絡を行い、安全対策を講じる等状況に即した適切な措置を行う。 (5) 請負者は作業の中止及び工事関係者の退避措置の実施の情報をエンジニアに速やかに連絡を行う。</p>		<p>1.12 Suspension of Construction for Accident / Disaster Prevention</p> <p>For preventing the occurrence of work-related accidents or natural disasters during construction and within the construction area, The Contractor shall;</p> <p>(1) state Contractor's criteria of suspension other than the criteria of suspension prescribed in the General Condition (GC 16) and the Special Specifications, as well as the person to judge, notification method, evacuation method, etc. in the health and safety management plan and submit it to the Engineer. (2) post the criteria and the evacuation method on the Site and in the site office, and disseminate them to all work-related persons. (3) constantly perform placement and observation of instruments for decision of suspension and securing of information gathering means etc. (4) take appropriate measures, if work-related accidents or natural disasters are expected to occur during the construction work and in the construction area, such as discontinuing the work immediately, having the work-related persons evacuate, contacting necessary information, taking safety measures, etc. accordingly. (5) promptly notify the Engineer about the information on the suspension of work and the implementation of evacuation measures of work-related persons.</p>
<p>1.13. 事故発生時の措置</p> <p>請負者は工事の施工により事故が発生した時、次の措置を行わなくてはならない。</p> <p>1.13.1. 被災者の救護、2次災害の防止</p>		<p>1.13 Measures to Be Taken in the Event of Accident</p> <p>The Contractor shall take the following measures when an accident occurs during construction.</p> <p>1.13.1 Relief of Victims, Prevention of Secondary Accident</p>

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<p>事故が発生した場合、請負者は直ちに作業を中止し、以下の措置を実施しなくてはならない。</p> <ol style="list-style-type: none"> (1) 被災者の救護活動 (2) 二次災害の防止活動 (3) エンジニアが指定する作業、又は工事の中断 <p>1.13.2. 事故発生、原因調査結果、再発防止策の報告</p> <p>請負者は緊急事態対応計画に基づき、事故発生の報告を次のように行わなくてはならない。なお、特記仕様書に特記がある場合はその規定に従うものとする。</p> <ol style="list-style-type: none"> (1) 事故発生の第1報: エンジニアへ発生後、出来るだけ早く電話またはその他の手段で報告する。(エンジニアは発注者及び JICA へ報告する。) (2) 事故の状況報告第1報: エンジニアへ発生後 24 時間以内に、所定の様式の文書で事故情報第1報を報告する。(エンジニアは発注者及び JICA へ報告する。) (3) 事故の原因調査・現場状況等の報告: エンジニアへ原則毎日報告する。(エンジニアは発注者及び JICA へ報告する。) (4) 再発防止策等の報告: 事故発生後1週間以内またはエンジニアが同意した期間以内に、エンジニアへ原因調査、再発防止策等の報告を行う。(エンジニアは発注者及び JICA へ報告する。) <p>1.13.3. 工事の再開手続き</p> <p>事故が発生した現場での工事再開手続きは以下のとおりとする。</p> <ol style="list-style-type: none"> (1) 請負者は再発防止策をエンジニアに提出する。 (2) 現場での再発防止策の試行を行い、エンジニアがその有効性を確認する。 (3) 請負者はエンジニアへ工事の再開申請を行う。 (4) エンジニアが工事の再開に同意した後、請負者は工事を再開する。 		<p>In the event of an accident, the Contractor shall immediately stop the work and carry out the following measures;</p> <ol style="list-style-type: none"> (1) Relief of victims (2) Prevention of secondary accident (3) Suspension of work / works designated by the Engineer or of whole construction work <p>1.13.2 Report on Accident Occurrence, Cause Investigation Result, Recurrence Prevention Measure</p> <p>Based on the emergency response plan, the Contractor shall report the accident occurrence as follows. In addition, if there is a special provision in the Special Specifications, the Contractor shall conform with the provision.</p> <ol style="list-style-type: none"> (1) First report of accident occurrence: The Contractor shall report to the Engineer, by telephone or other means as soon as possible. (The Engineer reports to the Employer and JICA.) (2) First report on the situation of the accident: The Contractor shall report the accident information with the prescribed form within 24 hours after the occurrence to the Engineer. (The Engineer reports to the Employer and JICA.) (3) Report on the cause investigation of the accident and on the site situation etc.: The Contractor shall report to the Engineer every day in principle. (The Engineer reports to the Employer and JICA.) (4) Report on recurrence prevention measures etc.: The Contractor shall report on cause investigation, measures to prevent recurrence etc. to the Engineer within one week after accident occurrence or within the period consented with the Engineer. <p>1.13.3 Construction Resumption Procedure</p> <p>Procedure for resuming construction at the site where the accident occurred is as follows;</p> <ol style="list-style-type: none"> (1) The Contractor submits recurrence prevention measures to the Engineer. (2) The Contractor tries recurrence prevention measures at the site, and the Engineer confirms its effectiveness. (3) The Contractor applies for the Engineer to resume construction. (4) After the Engineer agrees to restart the construction, the Contractor resumes construction.
<p>1.14. 安全要求事項に対する重大な不遵守に対するエンジニアの指示</p> <p>契約上の安全要求事項に対する重大な不遵守がある場合には、契約条件書 3.3 条エンジニアの指示に基づき、エンジニアは次の指示を行うことができる。</p> <ol style="list-style-type: none"> (1) 工事の全部または一部の中断の指示 (契約条件書 8.8 条 [工事の中断]) (2) 安全管理要員の交代の指示 (契約条件書 6.9 条 [請負者の要員]) 		<p>1.14 Engineer's Instructions for Serious Noncompliance with Safety Requirements</p> <p>In the event of serious noncompliance with the contractual safety requirements, the engineer may issue the following instructions to the Contractor under the terms in the GC 3.3 "Instruction of the Engineer".</p> <ol style="list-style-type: none"> (1) Instructions for suspension of all or part of the Work (GC 8.8 "Suspension of Work") (2) Instructions for replacement of safety management personnel ("GC 6.9 [Contractor's Personnel])
<p>1.15. 安全衛生月報</p> <p>請負者は月次作業進捗報告書の一部として、安全衛生措置、安全衛生活動、事故・ニアミス発生状況、統計値等を詳細に記載した安全衛生月報を添付しなくてはならない。</p>		<p>1.15 Health and Safety Monthly Report</p> <p>As part of the monthly work progress report, the Contractor shall attach a health and safety monthly report detailing health and safety measures, health and safety activities, accident / near-miss occurrence status, statistical data, etc.</p>
<p>1.16. 個人用保護具</p> <p>請負者は、請負者の要員が工事で使用しなくてはならない個人用保護具(Personal protective equipment:PPE)を、請負者の費用で請負者の要員へ提供しなくてはならない。個人用保護具の詳細については本スペックの 2.10.5 保護具等の着用と使用に規定する。</p>		<p>1.16 Personal Protective Equipment</p> <p>The Contractor shall provide personal protective equipment (PPE), which Contractor's Personnel shall use for construction, to Contractor's Personnel at the cost of the Contractor. Details of personal protective equipment are provided in 2.10.5 Wearing and Using Protective Equipment of the Specification.</p>

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<p>安全宣言</p> <p>発注者は、全ての工事関係者の労働災害ゼロを目指し、エンジニア・請負者と共に、工事遂行において「安全第一」であらゆる安全衛生対策を実施することを宣言する。</p> <p>発注者の安全衛生対策の実施に当たり、発注者は契約上の責務を遂行する</p>	<p>Safety Declaration</p> <p>The Employer hereby declares, in collaboration with the Engineer and the Contractor, to take every possible measure for occupational health and safety in execution of the Work with the slogan of “Safety First”.</p> <p>In taking health and safety measures, the Employer will fulfil contractual</p>	

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<p>他、必要に応じて請負者への安全対策上の課題の解決のための協力を行う。 発注者は、請負者が工事の安全衛生に関する全ての責任を負って、労働災害ゼロを達成することを強く期待し、請負者が最低限実施すべき発注者の安全要求事項を本仕様書に規定した。</p>	<p>obligations and also will cooperate with the Contractor for solving safety issues as necessary. The Employer has, in this Specification, specified the minimum safety requirements that the Contractor shall implement, expecting strongly the Contractor to achieve “Zero Accident” taking full responsibilities on health and safety of the Work</p>	
<p>1 総則 1.1 総則 1.1.1 用語の定義 本仕様書で使用する用語の定義は以下のとおりである。また、契約条件書で定義された用語を使用する場合は、その定義に従う。 (1) 工事関係者:発注者の要員、請負者の要員、工事現場に入場を許可された者をいう。 (2) 安全衛生管理者(Health and Safety Officer):契約条件書 GC6.7 に規定の事故防止責任者 (accident prevention officer)と同義である。 (3) 作業員:元請及び下請の作業員で、GC6 で使用している労働者 (labour)と同義とする。 (4) 施工計画書(Method Statement):契約に基づき請負者が作成する工事全体の施工法、工程、品質、安全等について記述した書類をいう。 (5) 作業計画書(Particular Method Statement):請負者が実施する各工種又は作業の施工法、工程、品質、安全等について詳細に記述した書類をいう。 (6) 作業主任 (Operation Leader):Annex 4 に規定する作業に関して、本仕様書 1.9 (1) (c)に規定する技能講習を修了し、安全な作業を指揮する能力を有すると請負者に認定された作業員をいう。</p>	<p>1 General 1.1 General 1.1.1 Terminology and Definitions Terminology and definitions in this Specification are as follows. When using the terminology defined in the General Conditions, its definitions shall apply. (1) Persons related with the Work: The Employer’s personnel, the Contractor’s personnel and persons authorized to enter the construction site (2) Health and Safety Officer: Synonymous with the accident prevention officer stipulated in the GC6.7 of the General Conditions (3) Worker: Workers of the main contractor and subcontractors, synonymous with labour used in GC6.7 of the General Conditions (4) Method Statement: A document that describes the construction method, schedule, quality, safety, etc. of the entire construction created by the Contractor based on the Contract (5) Particular Method Statement: A document that describes in detail the construction method, schedule, quality, safety, etc. of each work type or work performed by the Contractor (6) Operation Leader: A worker who is certified as capable of directing safely the works specified in Annex 4 finishing the skill training course specified in 1.9 (1)(c) of this Specification</p>	
<p>1.1.2 目的 本仕様書は、契約に基づき請負者が実施する全ての工事に関係する工事現場内、工事現場周辺及び公道における発注者及び請負者の要員並びに工事により影響を受ける住民等の安全と健康の維持及び事故防止のために、請負者が実施すべき労働安全衛生上の対策にかかる要求事項を規定する。</p>	<p>1.1.2 Purpose This Specification stipulates the requirements for occupational health and safety measures that the Contractor shall implement to prevent accidents and maintain health and safety of the Employer’s and the Contractor’s personnel within and around of the site and on the public roads, and also the people who may be affected by the construction work that the Contractor performs based on the contract.</p>	
<p>1.1.3 適用範囲 本仕様書は契約に基づき実施する全ての工事に適用する。 本仕様書の規定の変更は原則として認められない。</p>	<p>1.1.3 Scope of Application This specification applies to all construction works carried out based on the Contract. Changes to the provisions of this Specification shall not be permitted in principle.</p>	
<p>1.2 法律及び引用基準 1.2.1 法律と本仕様書の関係</p>	<p>1.2 Laws and Reference Standards 1.2.1 Relationship between Laws and this Specification</p>	

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<p>請負者は、工事の実施に当り労働安全衛生に関係する当該国の法律を遵守しなければならない。ただし、本仕様書の規定が当該国の法律より厳しい場合は本仕様書の規定が優先される。法律と本仕様書の規定のどちらを適用すべきかが明らかでない場合は、エンジニアの判断に従う。</p> <p>1.2.2 引用基準</p> <p>本仕様書内で用いられる引用基準はエンジニアの同意のもとで、同等以上のものが用いられる場合に限り変更が認められる。また、別途の規定又はエンジニアからの指示がない限り、基準日（ベースデート）のものを使用しなければならない。</p>	<p>The Contractor shall comply with the occupational health and safety laws of the relevant country when executing the Work. However, if it is judged by the Engineer that the requirements of this Specification are more stringent than the laws of the relevant country, the Contractor shall apply the requirements of this Specification.</p> <p>1.2.2 Reference Standards</p> <p>The reference standards used in this Specification are subject to change with the consent of the Engineer only if equivalent or higher standards are used. Also, unless specified otherwise or instructed by the Engineer, standard as of the base date shall be used.</p>																									
<p>1.3 安全衛生にかかわる計画書</p> <p>1.3.1 請負者による計画書の提出</p> <p>請負者は次の計画書を作成し、エンジニアのレビューのために下記の期限までに提出しなければならない。</p> <table border="1"> <thead> <tr> <th></th> <th>計画書</th> <th>請負者の提出期限</th> <th>エンジニアの回答期限</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>安全衛生計画書 (Health and Safety Plan)</td> <td>1) 契約条件書 GC8.1 で規定の工事開始日から 28 日以内 2) 現場状況の変化に応じ随時見直しを行った時 3) 契約条件書 GC4.1 によるエンジニアの要請があった場合、要請日から 14 日以内</td> <td>受領後 21 日以内</td> </tr> <tr> <td>2</td> <td>安全衛生詳細計画書(Particular Health and Safety Plan)</td> <td>1) 各工種もしくは作業の開始 21 日以前 2) 現場状況の変化に応じ随時見直しを行った時 3) 契約条件書 GC4.1 によるエンジニアの要請があった場合、要請日から 14 日以内</td> <td>受領後 14 日以内</td> </tr> </tbody> </table> <p>請負者は、入札時に提出した安全衛生計画書を、施工計画書に基づき最新化し、提出期限までに提出しなければならない。</p> <p>請負者は、安全衛生詳細計画書を、関連する各工種又は作業にかかる作業計画書に沿って作成しなければならない。作成に当たっては図、写真等も使用し、明快で理解しやすい書類としなければならない。</p>		計画書	請負者の提出期限	エンジニアの回答期限	1	安全衛生計画書 (Health and Safety Plan)	1) 契約条件書 GC8.1 で規定の工事開始日から 28 日以内 2) 現場状況の変化に応じ随時見直しを行った時 3) 契約条件書 GC4.1 によるエンジニアの要請があった場合、要請日から 14 日以内	受領後 21 日以内	2	安全衛生詳細計画書(Particular Health and Safety Plan)	1) 各工種もしくは作業の開始 21 日以前 2) 現場状況の変化に応じ随時見直しを行った時 3) 契約条件書 GC4.1 によるエンジニアの要請があった場合、要請日から 14 日以内	受領後 14 日以内	<p>1.3 Plans for Health and Safety</p> <p>1.3.1 Submission of Plans by Contractor</p> <p>The Contractor shall create and submit the following plans for the Engineer's review by the deadline specified in the table below.</p> <table border="1"> <thead> <tr> <th></th> <th>Plan</th> <th>Deadline for Submission by the Contractor</th> <th>Deadline for Response by the Engineer</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Health and Safety Plan</td> <td>1) Within 28 days from the commencement date stipulated in GC 8.1 of the General Conditions 2) When reviewed in accordance with changes in the site situation 3) Within 14 days from the date when the Engineer requests to submit the plan based on the GC4.1 of the General Conditions</td> <td>Within 21 days after receipt</td> </tr> <tr> <td>2</td> <td>Particular Health and Safety Plan</td> <td>1) Within 21 days before starting each work type or work 2) When reviewed in accordance with changes in the site situation 3) Within 14 days from the date when the Engineer requests to submit the plan based on the GC4.1 of the General Conditions</td> <td>Within 14 days after receipt</td> </tr> </tbody> </table> <p>The Contractor shall update the Health and Safety Plan that was submitted at the time of bidding based on the Method Statement and submit the revised plan by the deadline.</p> <p>The Contractor shall create the Particular Health and Safety Plan in accordance with the relevant Particular Method Statement for each work type or work. The</p>		Plan	Deadline for Submission by the Contractor	Deadline for Response by the Engineer	1	Health and Safety Plan	1) Within 28 days from the commencement date stipulated in GC 8.1 of the General Conditions 2) When reviewed in accordance with changes in the site situation 3) Within 14 days from the date when the Engineer requests to submit the plan based on the GC4.1 of the General Conditions	Within 21 days after receipt	2	Particular Health and Safety Plan	1) Within 21 days before starting each work type or work 2) When reviewed in accordance with changes in the site situation 3) Within 14 days from the date when the Engineer requests to submit the plan based on the GC4.1 of the General Conditions	Within 14 days after receipt	
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<p>異なる工種又は作業において共通する安全衛生の措置については、各工種・作業用に策定する安全衛生詳細計画書とは別に、共通の詳細計画書を作成し、同計画書にとりまとめて記載することも可能とする。なお、その場合において、最初の作業以降はこの安全衛生詳細計画書を、各作業での共通措置として使用することが可能である。</p> <p>請負者は現場の進捗や状況の変化に応じて、安全衛生計画書及び安全衛生詳細計画書を随時改訂し、エンジニアに提出しなければならない。</p> <p>安全衛生計画書及び安全衛生詳細計画書は、現場の閲覧可能な場所に置くことにより、請負者及び発注者の要員が常時閲覧することが出来るようにしなければならない。</p>	<p>Particular Health and Safety Plan shall be clearly made and easy to understand using figures and photos etc.</p> <p>Health and safety measures that are common to different works or types of work may be included in the common Particular Health and Safety Plan that is made seperatedly with the Particular Health and Safety Plan for each work or type of work. In such a case, the common Particular Health and Safety Plan can be used as common health and safety measures for different work types or works thereafter.</p> <p>The Contractor shall revise the Health and Safety Plan and the Particular Health and Safety Plan from time to time and submit it to the Engineer according to the progress of the Work and changes in the site situation.</p> <p>The Health and Safety Plan and the Particular Health and Safety Plan shall be kept accessible to the Contractor's and the Employer's personnel by placing them at a location in the site where they can be viewed at any time.</p>	
<p>1.3.2 エンジニアによる計画書のレビュー</p> <p>エンジニアは、請負者から提出された計画書を本仕様書 1.3.1 に定める期限内にレビューするものとする。</p> <p>エンジニアは、契約不適合がないと判断した場合は、notice of no-objection を請負者に通知する。</p> <p>エンジニアは、契約不適合があると判断した場合、請負者に通知し、是正を求める。その場合、請負者は速やかに是正した計画書を再提出しなければならない。</p> <p>エンジニアが 1.3.1 に定める期限内に通知をしない場合は、エンジニアが notice of no-objection を発出したものとみなされる。</p>	<p>1.3.2 Review of Plans by the Engineer</p> <p>The Engineer shall review the plans submitted by the Contractor within the time limit specified in 1.3.1 of this Specification.</p> <p>If the Engineer determines that there is no nonconformity to the Contract, he shall notify the contractor of a notice of no-objection.</p> <p>If the Engineer determines that there is a nonconformity, he notifies the Contractor to make correction. In that case, the Contractor shall resubmit the corrected plan promptly.</p> <p>If the Engineer does not give notice within the time limit specified in 1.3.1, it is considered that the Engineer has issued a notice of no-objection.</p>	
<p>1.3.3 安全衛生計画書</p> <p>請負者は Annex 1を参照し、安全衛生計画書を作成しなければならない。安全衛生計画書は、次の事項を含まなければならない。</p> <ol style="list-style-type: none"> (1) 工事の概要 (2) 請負者の安全衛生管理の方針 (3) 安全衛生管理体制及び要員の責務と権限 (4) 安全衛生関連の法律・基準 (5) 工事の安全衛生のリスクアセスメントの方針 (6) 建設機械・器具の安全対策の方針 (7) 情報共有・コミュニケーションの方針 (8) 安全衛生教育・訓練の方針及び計画概要 (9) 安全衛生関連の設備・保護具の使用や配備の方針 (10) 安全衛生ルール(の作成方針) (11) 現場の巡視計画 (12) 公衆安全衛生対策の方針 	<p>1.3.3 Health and Safety Plan</p> <p>The Contractor shall create The Health and Safety Plan referring to Annex 1.</p> <p>The Health and Safety Plan shall include the following items:</p> <ol style="list-style-type: none"> (1) Outline of the Work (2) The Contractor's policy on health and safety management (3) Health and safety management system, responsibility and authority of personnel (4) Health and safety laws and standards (5) Policy on health and safety risk assessment of the Work (6) Policy on safety measures for construction machinery and equipment (7) Information sharing and communication policy (8) Policy and outline of plans for health and safety education and training (9) Policy on use and deployment of health and safety related facilities and protective equipment (10) Policy to create health and safety rules 	

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<ul style="list-style-type: none"> (13) 交通事故対策の方針 (14) 事故発生を防止するための取り組みにかかる方針 (15) 事故発生時の対応、再発防止策の策定方法 (16) 労働衛生環境維持のための施設 (17) 緊急事態対応計画 (18) 救急救護計画の作成方針 (19) 作業中断基準 (20) 安全衛生管理活動のモニタリング及びレビューの方針 (21) 労働災害時の請負者の要員の救済 	<ul style="list-style-type: none"> (11) On-site patrol plan (12) Policy of public health and safety measures (13) Policy of preventing traffic accident measures (14) Policy for efforts to prevent accidents (15) Response at the time of accident occurrence and method of formulation of preventive measures (16) Facilities for maintaining the occupational health environment (17) Emergency response plan (18) Development policy of first aid plan (19) Work discontinuation criteria (20) Policy of monitoring and review of health and safety management activities (21) Relief of Contractor's personnel at occupational accident 	
<p>1.3.4 安全衛生詳細計画書</p> <p>請負者は安全衛生詳細計画書を関連する作業計画書に沿って作成し、現場での安全衛生措置の実施にあたっては、同計画書を遵守しなければならない。なお、安全衛生詳細計画書と作業計画書は別冊又は合冊での作成を可とする。</p> <p>安全衛生詳細計画書は以下を遵守して作成されなければならない。</p> <p>(1) 安全衛生詳細計画書は、次の事項を含む。</p> <ul style="list-style-type: none"> (a) 作業の概要と作業手順 (b) 安全管理体制、要員、責務と権限 (c) 作業のリスクアセスメント (d) 作業に対する安全措置 (e) 請負者の要員の防護具 (f) 請負者の要員の安全教育・訓練及び作業前 Tool Box Meeting (TBM) (g) 請負者の要員間の情報共有とコミュニケーション方法 (h) 教育・訓練及び作業前 TBM で使用する教材 (i) 安全衛生管理のための措置の実施とモニタリング (j) 緊急事態対応 (k) 救急救護対応 (l) その他の必要事項 <p>工事・作業の性質から上記以外の項目が必要となる場合には、本仕様書の当該工事の規定を参照し、適宜内容を補うものとする。</p> <p>(2) 請負者は、安全衛生詳細計画書の作成にあたっては、作業員の意見も考慮する。</p> <p>(3) 上記(1)(c)において、請負者は、作業の安全衛生に関する危険源(ハザード)の特定及びリスク低減措置の検討を行なう。</p>	<p>1.3.4 Particular Health and Safety Plan</p> <p>The Contractor shall prepare the Particular Health and Safety Plan in accordance with the related Particular Method Statement and shall comply with the Plan when implementing health and safety measures on site.</p> <p>The Particular Health and Safety Plan and the Particular Method Statement can be prepared separately or in combination.</p> <p>The Particular Health and Safety Plan shall be prepared in compliance with the following:</p> <p>(1) The Particular Health and Safety Plan shall include:</p> <ul style="list-style-type: none"> (a) Work outline and work procedure (b) Safety management system and responsibility and authority of personnel (c) Risk assessment of the work (d) Safety measures for the work (e) Protective equipment for the Contractor's personnel (f) Safety education and training of the Contractor's personnel and Tool Box Meeting (TBM) (g) Method of information sharing and communication among the Contractor's personnel (h) Teaching materials used in education, training and pre-operation TBM before work (i) Implementation and monitoring of measures for health and safety management (j) Emergency response (k) First aid response (l) Other necessary matters 	

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<p>リスクアセスメントは、以下の手順による。</p> <p>(a) 危険源の特定</p> <p>(b) リスクの評価</p> <p>(a) 低減措置の決定</p> <p>リスク低減措置の検討・実施にあたっての優先順位は以下に示す順とし、合理的に実現可能な限り、より高い優先順位のリスク低減措置を実施すること。</p> <p>(a) 危険な作業の廃止等危険源の除去</p> <p>(b) より安全な施工方法への変更、危険性の低いプロセス、操作、材料又は設備への代替</p> <p>(c) 工学的対策</p> <p>(d) 管理的対策</p> <p>(e) 保護具の使用</p>	<p>If items other than the above are necessary due to the nature of work, the contents of this Specification shall be supplemented by referring to the provisions of the work concerned.</p> <p>(2) The Contractor shall also consider the opinions of the workers in preparing the Particular Health and Safety Plan</p> <p>(3) The Contractor shall conduct identification hazards and study of risk reduction in relation with work health and safety in (1) (c) above.</p> <p>The procedure of risk assessment is as follows.</p> <p>(a) Identifying hazards</p> <p>(b) Evaluating risks</p> <p>(c) Determining measures of risk reduction</p> <p>Priorities for considering and implementing risk reduction measures shall be in the following order and as far as is practicable measures of the higher priority shall be taken.</p> <p>(a) Removal of hazards such as eliminating dangerous works</p> <p>(b) Changing to a safer construction meathod, and alternating to low risk processes, operations, materials or equipment</p> <p>(c) Engineering measures</p> <p>(d) Management measures</p> <p>(e) Use of protective equipment</p>	
<p>1.4 安全衛生管理体制</p> <p>1.4.1 安全衛生管理体制</p> <p>請負者は、工事関係者及び公衆の安全衛生の確保を図るため、次項に記載する安全衛生管理にかかると要員を指名又は配置し、適切な安全衛生管理体制を確立・維持しなければならない。</p>	<p>1.4 Health and Safety Management System</p> <p>1.4.1 Health and Safety Management System</p> <p>In order to ensure the health and safety of Personnel related to the Work and the public, the Contractor shall appoint or assign personnel related to the health and safety management described in 1.4.2 below, and establish and maintain an appropriate health and safety management system.</p>	
<p>1.4.2 安全衛生管理にかかると要員の配置、要件、責務、権限</p> <p>(1) 請負者の代理人(Contractor's Representative)</p> <p>請負者の代理人は、工事の実施全般に係わる最高責任者として、下記の責務を負う。</p> <p>(a) 請負者の安全衛生に係わる方針の請負者の要員への宣言とその実践</p> <p>(b) 安全衛生管理者が求める安全衛生管理業務に必要となるリソースの付与</p> <p>(2) 安全衛生管理者</p> <p>請負者は、安全及び衛生の維持と事故の防止のために安全衛生に関連する業務を専任で統括する安全衛生管理者を配置し、同管理者に請負</p>	<p>1.4.2 Staffing, Requirements, Responsibilities, Authority of Health and Safety Management Personnel</p> <p>(1) Contractor's Representative</p> <p>The Contractor's Representative shall have the following responsibilities as the chief officer responsible for the overall implementation of the Work.</p> <p>(a) Declaration to the Contractor's personnel of the Contractor's policy concerning health and safety and its practice</p> <p>(b) Providing resources necessary for the health and safety management work required by the Health and Safety Officer</p> <p>(2) Health and Safety Officer</p>	

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<p>者の全要員に対して強制力を持つ指示を与える権限を付与しなければならない。</p> <p>請負者は、当該国の法律で要求される安全衛生管理者としての資格を有する者で、かつ相応の能力・経験を有したものを安全衛生管理者として配置する。</p> <p>当該国に法律上の要求資格が無い場合、安全衛生管理について相応の実務経験を有し、請負者が安全衛生管理能力を保証する者で、エンジニアが同意した者を配置しなければならない。</p> <p>安全衛生管理者は、現場の安全及び衛生の維持と事故の防止のために、以下の安全衛生に関連する業務を専任で統括し、これらの業務に関する責務と権限を有しなければならない。</p> <p>(a) 安全衛生管理業務</p> <p>(i) 安全衛生計画書及び安全衛生詳細計画書の作成、実施、評価及び改善の実施</p> <p>(ii) 月例の安全管理活動予定表の作成、請負者の要員への配布、エンジニアへの提出及び活動状況の進捗報告書への記載</p> <p>(iii) 現場の不安全状態や請負者の要員の不安全行動の改善の実施</p> <p>(iv) 発注者及びエンジニアとの安全管理に関する協議</p> <p>(v) 事故発生時、その他必要な場合における工事中断の指示</p> <p>(vi) 事故発生時の対応と再発防止策の作成と実施</p> <p>(vii) 事故発生時のエンジニアへの報告と協議</p> <p>(viii) 安全衛生スタッフの任命</p> <p>(b) 請負者の要員以外の者による不安全行動を見かけたときの請負者の代理人及びエンジニアへの報告</p> <p>(c) 安全及び衛生の維持と事故の防止のため、請負者の要員への改善措置の指示</p> <p>(d) 作業員の健康状態の確認</p> <p>(e) 各種訓練・教育の実施計画の立案と実施</p> <p>(f) 安全統計の作成</p> <p>(g) 安全衛生管理活動の請負者の代理人への月例報告</p> <p>(h) 危険予知(KY)活動</p> <p>(i) ニアミス(ヒヤリハット)事例の収集</p> <p>(3) 安全衛生スタッフ(Health and Safety Staff)</p> <p>安全衛生スタッフは、安全衛生管理者の指示を受け、また、これを補佐し、現場の安全衛生管理の実務を担当する。</p> <p>請負者は、安全管理に必要な十分な数の安全衛生スタッフを配置しなければならない。特に複数の作業が同時に実施される現場や多数の作業員がいる現場、又はシフトで工事が実施される場合には、十分に考慮するこ</p>	<p>The Contractor shall designate a dedicated health and safety officer who oversees health and safety related tasks to maintain health and safety and prevent accidents, and shall give him a forceful authority to direct all personnel of the Contractor. The Health and Safety Officer shall be a person who has qualification as health and safety manager required by law of the country concerned and has appropriate ability and experience.</p> <p>In case of nonexistence of such qualification in the country, the Contractor shall designate a person who has appropriate work experience on health and safety and whom the Contractor guarantees his ability of health and safety management and the Engineer consents the designation.</p> <p>The Health and Safety Officer shall be responsible for overseeing the following health and safety related tasks in full-time and have the responsibility and authority for these tasks in order to maintain health and safety of the site and prevent accidents.</p> <p>(a) Health and Safety Management Works</p> <p>(i) Preparation of Health and Safety Plan and Particular Health and Safety Plan, implementation of the Plan, evaluation and implementation of improvement</p> <p>(ii) Preparation of monthly schedule of health and safety management activities, distribution to the Contractor's personnel and submission to the Engineer, and description of activity status on the progress report</p> <p>(iii) Implementation of improvement of the unsafe condition of the site and the unsafe behavior of the Contractor's personnel</p> <p>(iv) Consultation on safety management with the Employer and the Engineer</p> <p>(v) Instruction of construction discontinuation in case of accident occurrence or other necessary case</p> <p>(vi) Responding to accidents and creating and implementing measures to prevent recurrence</p> <p>(vii) Reporting and consulting to the Engineers when an accident occurs</p> <p>(viii) Appointment of health and safety staff</p> <p>(b) Report to the Contractor's Representative and the Engineer when seeing unsafe behavior by someone other than the Contractor's personnel</p>	

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<p>と。また現場状況に応じて、安全衛生スタッフの追加をエンジニアが合理的な理由を示して指示する場合、同指示に従わなければならない。 安全衛生スタッフの責務、権限は以下である。</p> <p>(a) 安全衛生管理者の指示により現場を巡回し、不安全行動や不安全状態を発見した場合、関連の請負者の要員に状況を通知し、協力して改善を実施する。</p> <p>(b) 安全衛生に関する状況を安全衛生管理者に報告し、その指示を受けて現場の安全衛生の改善を実施する。</p>	<p>(c) Instructing the Contractor's personnel to take improvement measures for maintaining health and safety and preventing accidents</p> <p>(d) Checking worker's health status</p> <p>(e) Planning and implementation of various training and education implementation plans</p> <p>(f) Creation of safety statistics</p> <p>(g) Monthly report to the Contactor's Representative of health and safety management activities</p> <p>(h) Hazard prediction activity (Kiken Yochi: KY)</p> <p>(i) Collection of near miss cases</p> <p>(3) Health and Safety Staff</p> <p>The Health and Safety Staff receive instructions from the Health and Safety Officer and assists him in performing on-site health and safety management practices.</p> <p>The Contractor shall appoint a sufficient number of Health and Safety Staff necessary for safety management. The Contractor shall fully consider about the number of Health and Safety Staff, especially when work is being carried out with multiple tasks being performed simultaneously, or where there are a large number of workers, or when a shift is performed.</p> <p>However, in accordance with the situation of the site, if the Engineer, with a rational reason, instructs to add Safety and Health Staff, the Contractor shall follow the instruction.</p> <p>The Safety and Health Staff shall:</p> <p>(a) patrol the site under the direction of the Health and Safety Officer, and if an unsafe action or an unsafe condition is found, notify to the relevant Contractor's personnel, and implement improvement measures in cooperation with the personnel.</p> <p>(b) report the health and safety situation to the Health and Safety Officer and implement improvement measures of health and safety based on his instruction.</p>	
<p>1.5 安全衛生管理のための会議</p> <p>1.5.1 安全管理措置の協議及び周知徹底のための会議</p> <p>請負者は、安全衛生管理にかかる請負者の要員間の情報共有を目的として、次の安全協議会を主催しなければならない。</p> <p>(1) 安全協議会の設置</p> <p>(a) 安全協議会の開催頻度は毎月1回以上</p>	<p>1.5 Meeting for Health and Safety Management</p> <p>1.5.1 Meeting for Discussion and Dissemination of Safety Management Measures</p> <p>The Contractor shall organize the following safety meeting for the purpose of sharing information regarding health and safety management among the Contractor's personnel.</p>	

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<p>(c) 安全協議会組織の構成員</p> <p>(i) 請負者の代理人</p> <p>(ii) 安全衛生管理者</p> <p>(iii) 安全衛生スタッフ</p> <p>(iv) 請負者現場スタッフ</p> <p>(v) 請負者本社安全管理担当者(必要に応じて)</p> <p>(vi) 下請けの代表者、安全衛生担当者及び現場スタッフ</p> <p>(i) その他必要な者(作業員の代表者等)</p> <p>(d) 協議事項</p> <p>請負者は安全衛生計画書および安全衛生詳細計画書を参照し、特に以下の事項を協議する。</p> <p>(i) 月間又は週間の工程計画と安全衛生上の留意事項</p> <p>(ii) 発生した事故と再発防止対策の共有</p> <p>(iii) 安全衛生管理者、安全衛生スタッフによる巡視結果に基づく作業員の危険の防止又は健康障害の防止に関する事項</p> <p>(iv) 本仕様書 1.5.2、1.5.3 に規定の会議の内容のフィードバック</p> <p>(v) 安全衛生表彰</p> <p>(vi) その他作業員の危険又は健康障害の防止に関する事項</p> <p>(2) 会議の計画及び実施結果の報告</p> <p>請負者は会議の計画、内容、運営方法等を、安全衛生計画書に記載し、エンジニアに提出しなければならない。また、実施した会議の内容・結果等は、進捗報告書に記載し報告しなければならない。</p>	<p>(1) Safety Council</p> <p>(a) The frequency of holding the safety council shall be at least once a month</p> <p>(b) Members of the Safety Council shall consist of:</p> <p>(i) Contactor's representative</p> <p>(ii) Health and safety officer</p> <p>(iii) Health and safety staff</p> <p>(iv) Contactor's site staff</p> <p>(v) Contactor's head office safety manager (as necessary)</p> <p>(vi) Subcontractors representatives, health and safety personnel, site staff</p> <p>(vii) Other necessary personnel (worker's representative etc.)</p> <p>(c) Matters to Discuss</p> <p>The Contractor shall discuss, in particular, the following matters referring to the Health and Safety Plan and the Particular Health and Safety Plan.</p> <p>(i) Monthly or weekly schedule and health and safety matters to pay attention</p> <p>(ii) Sharing information of accident occurred and prevention measures for recurrence</p> <p>(iii) Matters concerning prevention of workers' hazards and health problems based on the results of patrols by Health and Safety Officer and Health and Safety Staff</p> <p>(iv) Feedback on the contents of the meetings specified in 1.5.2, 1.5.3 of this Specification</p> <p>(v) Safety and health award</p> <p>(vi) Other matters concerning prevention workers' hazards and health problems</p> <p>(2) Report on Meeting Plan and Implementation Result</p> <p>The Contractor shall describe the meeting plan, contents and management method of the meetings in the Health and Safety Plan and submit it to the Engineer. In addition, the Contractor shall describe the contents and result of the meetings in the progress report.</p>	
<p>1.5.2 エンジニア主催の月例安全会議</p> <p>エンジニアは、発注者及び請負者、必要に応じて関係省庁が出席する月例の安全会議を主催する。エンジニア、発注者及び請負者は会議での決定事項に関し、それぞれの契約上の責務に応じて速やかに対応しなければならない。</p> <p>請負者は特に会議で安全衛生に関する契約及び関連法規上の不適合が指摘された場合は、速やかに対応しなければならない。</p>	<p>1.5.2 Monthly Safety Meeting Hosted by the Engineer</p> <p>The Engineer will host the monthly safety meeting attended by the Employer and the Contractor and, if necessary, the relevant authorities and agencies. The Engineer, the Employer and the Contractors shall respond promptly to the decisions made at the meeting according to their contractual obligations.</p> <p>The Contractor shall respond promptly, especially if the meeting points out any</p>	

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<p>会議の議題は次のとおりとする。</p> <p>(1) 安全衛生計画書、安全衛生詳細計画書の作成・提出状況</p> <p>(2) 安全衛生計画書、安全衛生詳細計画書の改善、改訂の必要性</p> <p>(3) 安全衛生管理体制の構築・変更</p> <p>(4) エンジニア・発注者によるインスペクションにかかる報告</p> <p>(5) 安全衛生管理活動の実施状況</p> <p>(6) 事故・ニアミスの報告と協議</p> <p>(7) 他の請負者による工事において、安全衛生上参考とすべき事象の共有</p> <p>(8) 警察、消防署ほかの関係団体との調整事項</p> <p>(9) その他</p>	<p>non-conformity to the Contract and related laws and regulations concerning health and safety matters.</p> <p>The agenda of the meeting shall be as follows.</p> <p>(1) The situation of preparation and submittal of Health and Safety Plan and Particular Health and Safety Plan</p> <p>(2) Needs for improvement and revision of Health and Safety Plan and Particular Health and Safety Plan</p> <p>(3) Establishment and change of the health and safety management system</p> <p>(4) Report on inspections by the Engineers and the Employer</p> <p>(5) Status of implementation of health and safety management activities</p> <p>(6) Report and discussion on accident and near miss</p> <p>(7) Sharing information of events on health and safety in construction by other contractors that should be referred to</p> <p>(8) Items to be coordinated with police, fire department and other related organizations</p> <p>(9) Others</p>	
<p>1.5.3 エンジニア主催の安全衛生調整会議</p> <p>請負者と他の請負者がそれぞれ実施する工事が相互に影響を与える場合には、エンジニアは、必要に応じて安全衛生調整会議を開催する。</p> <p>エンジニア、発注者及び請負者は、会議での決定事項に関し、それぞれの契約上の責務に応じて速やかに対応するものとする。</p> <p>会議の議題は次のとおりとする。</p> <p>(1) 請負者と他の請負者のそれぞれの工事が相互に影響により生じる現場の安全衛生に関する課題や問題点、対処</p> <p>(2) 警察、消防署ほかの関係団体との調整事項</p> <p>その他</p>	<p>1.5.3 Health and Safety Coordination Meeting Hosted by the Engineer</p> <p>If the works performed by the Contractor and the other contractors affect each other, the Engineer will host a health and safety coordination meeting as necessary.</p> <p>The Engineer, the Employer and the Contractors shall respond promptly to the decisions made at the meeting according to their contractual obligations.</p> <p>The agenda of the meeting shall be as follows.</p> <p>(1) Issues, problems and response related to site health and safety that arise due to the mutual impact of the work of the Contractor and other contractors</p> <p>(2) Items to be coordinated with police, fire department and other related organizations</p> <p>(3) Others</p>	
<p>1.6 安全衛生管理活動</p> <p>請負者は本仕様書 1.3.3 に規定の安全衛生計画(書)および本仕様書 1.3.4 に規定の安全衛生詳細計画(書)を忠実に実施しなければならない。請負者はかかる計画の実施を担保するための安全衛生管理活動を行わなければならない。安全衛生管理活動には以下のものを含むものとする。</p> <p>(1) 全体の管理活動</p> <p>(a) 本仕様書 1.4.2 (2)に規定の安全衛生管理者の業務および本仕様書 1.4.2 (3)に規定の安全衛生スタッフの業務</p>	<p>1.6 Health and Safety Management Activities</p> <p>The Contractor shall faithfully implement the Health and Safety Plan specified in this Specification 1.3.3 and the Particular Health and Safety Plan specified in 1.3.4. The Contractor shall perform health and safety management activities to secure the implementation of such plans.</p> <p>Health and safety management activities shall include:</p> <p>(1) Overall Management Activities</p> <p>(a) Tasks of the Health and Safety Officer as defined in 1.4.2 (2) of</p>	

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<p>(c) 本仕様書 1.5.1 で規定の会議の開催</p> <p>(d) 作業事前打合せ、着手前打合せ、工程打合せ</p> <p>(c) 安全衛生計画(書)および安全衛生詳細計画(書)実施に関するモニタリング</p> <p>(2) 作業員に対する日々の管理活動</p> <p>(a) 全体朝礼/作業前会議/TBM(全体的指示・個別作業の具体的指示・安全確認・伝達事項等)での安全衛生に関する指導と管理</p> <p>(b) 5S活動(整理・整頓・清掃・清潔・躰)の指導と管理</p> <p>(c) 危険予知(KY)活動の指導と管理</p> <p>(d) 安全教育訓練の指導と管理</p> <p>(f) 各種安全措置の指導と管理</p> <p>(3) モニタリング</p> <p>上記(1)(d)に規定のモニタリングは以下のとおり実施するものとする。</p> <p>(a) モニタリングのためのチェックリストの作成</p> <p>(b) 実施状況の定期・不定期のモニタリング</p> <p>(c) 未実施の又は不適合のある状態の改善</p> <p>(d) モニタリング記録の保存</p> <p>請負者は上記措置の実施又はモニタリングに関して、エンジニアから指示(Nonconformity Report (NCR))を受けた場合、エンジニアが指示する期限内に是正処置(Corrective Action)を講じ、処置が完了した場合には速やかにエンジニアに書面で報告を行わなければならない。</p>	<p>this Specification and of the Health and Safety Staff as defined in 1.4.3 (3)</p> <p>(a) Holding of the meeting specified in 1.5.1 of this Specification</p> <p>(b) Pre-work meeting, pre-start meeting, schedule meeting</p> <p>(c) Monitoring of implementation of the Health and Safety Plan and the Particular Health and Safety Plan</p> <p>(2) Daily Management Activities for Workers</p> <p>(a) Instruction and management on health and safety at general morning meeting / pre-work meeting / TBM (general instruction, specific instruction of individual work, safety confirmation, information to be conveyed, etc.)</p> <p>(b) Instruction and management of 5S Activities (Seiri: sorting, Seiton: tidying, Seiso: cleaning, Seiketu: cleanliness, Shituke: discipline)</p> <p>(c) Instruction and management of hazard prediction activity (Kiken Yochi: KY)</p> <p>(d) Instruction and management of safety education and training</p> <p>(e) Instruction and management of various safety measures</p> <p>(3) Monitoring</p> <p>In carrying out monitoring specified in 1.6 (1) (d) of this Specification, the Contractor shall:</p> <p>(a) create a checklist for monitoring</p> <p>(b) carry out regular and irregular monitoring of implementation status</p> <p>(c) improve unimproved or defective condition</p> <p>(d) store monitoring records</p> <p>If the Contractor receives instructions (Nonconformity Report (NCR)) from the Engineer regarding implementation or monitoring of the above-mentioned measures, the Contractor shall take corrective action within the time limit instructed by the Engineer and shall report it in writing to the Engineer when the corrective action is completed.</p>	
<p>1.7 記録の保管</p> <p>請負者は安全衛生に係わる次の記録を保管しなければならない。</p> <p>(1) 事故及びニアミス、労働災害の記録(本仕様書 1.3.3)</p> <p>(2) 安全衛生管理のための会議の記録(本仕様書 1.5.1 (2))</p> <p>(3) 安全衛生管理活動におけるモニタリングの記録(本仕様書 1.6)</p> <p>(4) 要員の教育訓練の記録 (本仕様書 1.9 (4))</p> <p>(5) 要員の健康管理の記録(本仕様書 1.8.1)</p>	<p>1.7 Storage of Record</p> <p>The Contractor shall keep the following records related to health and safety:</p> <p>(1) Records of accidents and near misses, occupational accidents (1.3.3 of this Specification)</p> <p>(2) Records of meetings for safety and health management (1.5.1 (2))</p> <p>(3) Record of monitoring of safety and health management activities (1.6 (3))</p> <p>(4) Record of health and safety education and training for the Contractor's personnel (1.9 (4))</p>	

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	(5) Records of health management for the Contractor's personnel (1.8.1)	
<p>1.8 請負者の要員の適正配置</p> <p>1.8.1 要員の適正配置上の留意点</p> <p>請負者は、以下の事項を考慮し、作業に必要な資格・技能・経験を有する要員を適正に配置しなければならない。</p> <p>請負者は要員の配置を記録し、安全衛生管理者は適正な配置を確認する。エンジニアはこの記録を随時閲覧できるものとする。</p> <ol style="list-style-type: none"> (1) 作業内容及び作業環境 (2) 業務経験、能力等 (3) 18歳未満の者に対する配慮 (4) 健康状態、毎日の作業前の健康状態 (5) 作業量の適正配分 <p>なお、健康状態に関する書類(既往歴と健康診断結果等)は、当該国における個人情報保護に関する法令を遵守し保管しなければならない。</p> <p>1.8.2 免許が必要な作業への要員の配置</p> <p>請負者は、Annex 2 及び Annex4 に示すような作業のうち、当該国の法律で免許が必要な作業については、免許を所有しかつ請負者が十分な知識、技能を持つと判断した者を従事させなければならない。</p>	<p>1.8 Proper Placement of Contractor's Personnel</p> <p>1.8.1 Points of Proper Placement of Contractor's Personnel</p> <p>The Contractor shall properly assign the Contractor's personnel who have the necessary qualifications, skills, and experience considering the following matters. The Contractor shall record the placement of workers and the Health and Safety Officer shall confirm the appropriateness of placement. The Engineer shall be able to view the record at any time.</p> <ol style="list-style-type: none"> (1) Work content and work environment (2) Work experience and ability etc. (3) Consideration for workers under 18 (4) Health condition, and health condition before daily work starts (5) Proper allocation of work volume <p>In addition, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the laws and regulations concerning personal information protection in the relevant country.</p> <p>1.8.2 Placement of Personnel for Works Requiring a License</p> <p>Among the operations shown in Annex 2 and Annex 4, the Contractor shall, in the work that requires a license under the laws of the country concerned, assign personnel who possesses a license and whom the Contractor judges that he has sufficient knowledge and skills.</p>	
<p>1.9 安全衛生教育訓練</p> <p>(1) 教育訓練の実施</p> <p>請負者は、当該国の法律を遵守し、安全衛生管理者主導の下、教育訓練を次の請負者の要員を対象に行わなければならない。</p> <ol style="list-style-type: none"> (a) 新規入場者及び作業内容の変更が予定される者 (b) 危険又は有害な業務へ配置予定の者 (c) 作業主任に任命が予定されている者 <p>請負者は、教育・訓練計画の概要(対象者、時期、教材、教育者・訓練者の選定にかかる方針等)を安全衛生計画書に含めなければならない。また、教育・訓練の開始前には、その詳細を含んだ安全衛生詳細計画書をエンジニアへ提出しなければならない。</p> <p>なお、教育・訓練は就業時間内に行わなくてはならない。また、教育・訓練に必要な費用は請負者が負担しなければならない。</p> <p>教育訓練は次の点に留意して実施しなければならない。</p> <ol style="list-style-type: none"> (a) 新規入場者及び作業内容の変更が予定される者の教育 	<p>1.9 Health and Safety Education and Training</p> <p>(1) Implementation of education and training</p> <p>The Contractor shall comply with the laws of the country concerned and, under the guidance of the Health and Safety Officer, conduct education and training for the following Contractor's personnel.</p> <ol style="list-style-type: none"> (a) Those who newly enter the site and those who are scheduled to change work (b) Those who are planned to be assigned to dangerous or harmful work (c) Those who are planned to be appointed as Operation Leaders <p>The Contractor shall include in the Health and Safety Plan the outline of the education and training plans (participants, time, teaching materials, policy of selecting educators and trainers). In addition, the Contractor shall submit the Particular Health and Safety Plan that includes the details to the Engineer before the start of these education</p>	

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<p>請負者は該当する者に対して、それぞれが従事する業務に関する安全及び衛生のため必要な、次の事項を含む教育を行わなければならない。</p> <p>(i) 指揮命令系統とコミュニケーション方法</p> <p>(ii) 機械等、原材料等の危険性又は有害性及びこれらの取扱い方法</p> <p>(iii) 安全装置、有害物抑制装置又は保護具の性能及びこれらの取扱い方法</p> <p>(iv) 作業手順</p> <p>(v) 作業開始前の点検</p> <p>(vi) 当該業務に関して発生するおそれのある疾病の原因及び予防</p> <p>(vii) 整理、整頓、清潔の保持</p> <p>(viii) 事故・緊急時等における応急措置及び退避</p> <p>(ix) 安全衛生ルール</p> <p>(x) その他、当該業務に関する安全又は衛生のために必要な事項</p> <p>なお、教育事項の全部又は一部に関し十分な知識及び技能を有していると認められる者については、当該事項についての教育を省略することができる。</p> <p>(b) 危険又は有害な業務へ配置予定の者への教育</p> <p>本仕様書の Annex 2 に掲げる危険又は有害な業務に作業員に従事させるときは、当該作業員に対し、その従事する業務に関する安全衛生のための特別教育を行わなければならない。</p> <p>請負者は、Annex 3 を参考として特別教育の教育科目及び教育時間を決定しなくてはならない。</p> <p>なお、当該業務に関し当該国の公的機関が発行する資格の保持者又は当該国若しくは他国の公的機関が実施する教育訓練の受講終了者等で、特別教育の項目の全部又は一部について十分な知識及び技能を有していると請負者が判断する作業員については、当該項目についての特別教育を省略することができる。</p> <p>(c) 作業主任に任命が予定されている者への教育</p> <p>請負者は、Annex 4 に示す作業に関し、作業主任を任命するときには、その従事する作業に関する安全衛生を含む技能講習を行わなければならない。</p> <p>請負者は、本仕様書の Annex 5 を参考として技能講習の教育科目及び教育時間を決定しなくてはならない。</p> <p>なお、当該作業に関し当該国の公的機関が発行する資格の保持者、あるいは当該国又は他国の公的機関が実施する講習の受講終了者等で、技能講習の項目の全部又は一部について十分な知識及び技能を有していると、請負者が判断する者については、当該項目につ</p>	<p>and training.</p> <p>Education and training shall be conducted during working hours and the Contractor shall bear the expenses necessary for education and training.</p> <p>Education and training shall be conducted paying attention to the following points.</p> <p>(a) Those who newly enter the site and those who are scheduled to change work</p> <p>The Contractor shall provide the relevant personnel with education necessary for health and safety of the work that they are engaged in, including the following matters.</p> <p>(i) Chain of command and communication method for the work</p> <p>(ii) Hazard or danger of machineries and raw materials, etc., and methods of handling them</p> <p>(iii) Performance and handling methods of safety devices, hazardous substance control devices and protective equipment</p> <p>(iv) Work procedure</p> <p>(v) Inspection before start of the work</p> <p>(vi) Causes and prevention of diseases that may occur in relation to the work concerned</p> <p>(vii) Maintenance of sorting, tidying, cleanliness of the site</p> <p>(viii) Emergency measures and evacuation at the time of accident etc.</p> <p>(ix) Health and safety rules</p> <p>(x) Other matters necessary for health or safety related to the works concerned</p> <p>However, education about the matter concerned can be omitted for those who are considered to have sufficient knowledge and skills about all or a part of the matter to be taught.</p> <p>(b) Those who are planned to be assigned to dangerous or harmful work</p> <p>When engaging workers in dangerous or harmful work listed in Annex 2 of this Specification, the workers shall be given special education including health and safety concerning the work to be engaged.</p> <p>The Contractor shall determine the educational subjects and teaching hours for the special education with reference to Annex 3.</p>	

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<p>いての技能講習を省略することができる。</p> <p>(2) 実地訓練の実施 教育の実施時に、保護具の取り扱いなどの実地訓練も取り入れなければならない。</p> <p>(3) 教育訓練担当者 教育訓練担当者は、当該国の法律に基づく教育資格を有する請負者の要員又は外部講師とし、法律に規定が無い場合は安全衛生管理者又は請負者が必要となる能力、経験があると認め、エンジニアが同意する者とする。</p> <p>(4) 教育訓練記録 教育訓練を行なったときは、受講者、科目等の記録を作成して保存し、エンジニアの要求のあるときは閲覧に供さなければならない。</p> <p>(5) 請負者の要員以外への安全衛生ルールの説明 請負者は、請負者の要員以外で現場に入場を許可された者に対して、必要に応じ現場の安全衛生に関するルールを説明しなければならない。</p>	<p>The special education for the work concerned can be omitted for the worker who holds the qualification issued by the public organization of the country concerned or who has finished the training course provided by the public organization of the country concerned or another country, and whom the Contractor judges as having sufficient knowledge and skills for all or part of items of the special education</p> <p>(c) Those who are planned to be appointed as Operation Leaders The Contractor shall, when appointing an Operation Leader for the works shown in Annex 4, conduct skill the training course including health and safety related to the work to be engaged. The Contractor shall determine the educational subjects and teaching hours for the skill training course with reference to Annex 5. The skill training course for the work concerned can be omitted for the worker who holds the qualification issued by the public organization of the country concerned or who has finished the training course provided by the public organization of the country concerned or another country, and whom the Contractor judges as having sufficient knowledge and skills for all or part of items of the skill training course.</p> <p>(2) Conduct of on-site training At the time of education, on-site training such as handling of protective equipment shall be taken in.</p> <p>(3) Education and training personnel Education and training lecturers shall be the Contractor's personnel who are qualified as a lecturer under the laws of the country concerned or external lecturers. In case of absence of such provision in the country concerned, the Health and Safety Officer or personnel whom the Contractor recognizes having necessary ability and experience and the Engineer agrees can become a lecturer.</p> <p>(4) Records of education and training When education and training is conducted, the Contractor shall create and store records of trainees, subjects, etc. and provide them for viewing by the Engineer when required by the Engineer.</p> <p>(5) Explanation of health and safety rules to persons other than the Contractor's personnel The Contractor shall explain health and safety rules of the site, as necessary, to persons other than the Contractor's personnel who are</p>	

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	permitted to enter the site.	

1.10 緊急事態対応計画及び緊急通報体制

請負者は、工事期間中に起きる自然災害、火災等の緊急事態に迅速かつ適切に対応するために、緊急事態対応計画を安全衛生計画書(又は必要に応じて安全衛生詳細計画書)の一部として作成し、工事関係者への周知徹底の上、緊急事態対応計画に基づく訓練を行わなくてはならない。また緊急通報体制を整備しなければならない。なお、工事中の事故発生時の対応は本仕様書 1.12 に従わなければならない。

(1) 緊急事態対応計画

緊急事態対応計画に関し次の措置を行わなくてはならない。

(a) 次の事項を記載すること。

(i) 想定される緊急事態の種類

(ii) 緊急通報体制

(iii) 緊急事態対応具体策

(b) 現場の状況の変化に応じた迅速な変更・改訂を行うこと。

(c) 安全衛生計画書の一部としてエンジニアに提出し、変更改定毎にエンジニアに提出すること。

(2) 緊急通報体制

緊急時においても相互確認可能な通報体制を構築しなければならない。また、緊急連絡表を作成し、事務所、現場等の見やすい場所に掲示すること。緊急連絡表の中で通報責任者、関係連絡先、担当者を定め、それぞれの電話番号を記入しなければならない。緊急連絡表には関係連絡先として必ず以下を含み、緊急事態の種類に応じてどの範囲まで連絡対象とするかを緊急事態対応具体策の中で規定しなければならない。

(a) 発注者及びエンジニア

(b) 関係省庁:行政機関、警察署や消防署等の関係省庁

(c) 請負者関係者:本社、現場、下請け、資材供給者等

(d) 当該事業の他の請負者

(3) 緊急事態対応訓練

緊急事態対応計画に基づき、緊急事態対応訓練を次のように行わなくてはならない。

(a) 別途規定のない限り半年毎に行うこと。

(b) 訓練計画を作成し、エンジニアに提出すること。

(c) 訓練結果に基づき、緊急事態対応計画の改善を行うこと。

(4) 緊急時の対応

請負者は施工中に緊急事態が発生したときには、上記(2)で示す緊急連絡表に基づき必要な情報共有を行ない、その上で作業の中断、作業員の退避を含む状況に即した適切な措置を講じなくてはならない。

1.10 Emergency Response Plan and Emergency Call System

The Contractor shall prepare an emergency response plan as a part of the Health and Safety Plan (or the Particular Health and Safety Plans as necessary) in order to promptly and appropriately respond to natural disasters, fires, and other emergencies that may occur during construction.

In addition, the Contractor shall disseminate the emergency response plan thoroughly to persons related with the Work and carry out training based on the plan. The Contractor shall also establish an emergency call system.

In the event of an accident during construction, 1.12 of this Specification shall be followed.

(1) Emergency response plan

For the emergency response plan, the Contractor shall:

(a) include the following items:

(i) expected types of emergency situation

(ii) emergency call system

(iii) specific measures for emergency response

(b) make quick changes and revisions in response to changes in the site situation

(c) submit to the Engineer as part of the Health and Safety Plan, and resubmit at every change and revision

(2) Emergency call system

The Contractor shall establish a communication system that can be mutually confirmed even in an emergency.

In addition, the Contractor shall make an emergency contact list and post it in an easy-to-see place such as the site office or the field. The emergency contact list shall include name of the person responsible for reporting, relevant contact points, persons in charge with their respective telephone numbers

The Contractor shall include the following relevant contact points in the emergency contact list and define in the concrete emergency response measures the extent to which contact is to be made in accordance with the type of emergency.

(a) the Employer and the Engineer

(b) the relevant authorities and agencies: administrative agencies, police stations and fire stations etc.

(c) the Contractor related individuals / corporation: head office, site, subcontractors, material suppliers etc.

(d) other contractors of the Work

(3) Emergency response training

The Contractor shall conduct emergency response training based on the

	<p>emergency response plan as follows:</p> <ul style="list-style-type: none">(a) implementing every six months unless otherwise specified(b) creating a training plan and submit it to the Engineer(c) improving the emergency response plan based on training results <p>(4) Emergency response</p> <p>When an emergency occurs during construction, the Contractor shall share the necessary information based on the emergency contact list in (2) above, and take appropriate measures including work discontinuation and evacuation of workers in accordance with the situation.</p>	
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<p>1.11 救急救護計画</p> <p>請負者は、現場での工事関係者のために、次の救急救護施設や用具、医療要員、救急車等の配置及び設置等の措置を実施しなければならない。請負者はかかる措置の内容をまとめた救急救護計画を作成し、安全衛生詳細計画書の一部として作成しなければならない。</p> <ol style="list-style-type: none"> (1) 応急手当ができる医療要員の配置 (2) 被災者を医療機関に適切に搬送できる車両の配置 (3) 応急処置室の設置 (4) 緊急時対応用の通信設備・手段の配置 (5) 工事規模及び工事の特徴に応じた応急処置具及び医薬品 (First Aid Kits)の配備 (6) 救急救護に関する各種情報の工事関係者への周知 <p>詳細な救急救護施設と医療要員に関する要求事項が契約の中で別途規定されている場合は、それを遵守しなければならない。</p>	<p>1.11 Emergency Relief Plan</p> <p>The Contractor shall, for persons related with the Work in the site, take measures such as the placement and installation of the following emergency relief facilities and equipment, medical personnel, ambulances, etc.</p> <p>The Contractor shall prepare an emergency relief plan summarizing such measures as a part of the Particular Health and Safety Plan.</p> <ol style="list-style-type: none"> (1) Placement of medical personnel who can provide first aid (2) Placement of vehicles that can properly transport victims to medical institutions (3) Establishment of first aid room (4) Arrangement of communication facilities and measures for emergency response (5) Deployment of first aid tools and medicines (first aid kits) in accordance with the scale and characteristics of the Work (6) Dissemination of various information about emergency relief to persons related with the Work <p>The Contractor shall comply with the provision regarding to the detailed requirements for emergency relief facilities and medical personnel , if separately provided in the Contract</p>	
<p>1.12 事故発生時の措置</p> <p>請負者は工事の施工により事故が発生した時には、次の措置を行わなければならない。</p> <p>1.12.1 事故発生現場における対応</p> <p>請負者は直ちに作業を中断し、必要に応じ以下の措置を実施しなければならない。</p> <ol style="list-style-type: none"> (1) 被災者の救護活動 (2) 二次災害の防止活動 (3) 現場の保全 (4) 事故に関連した工事の中断 (5) エンジニアが指示する措置 <p>1.12.2 事故発生、原因調査結果、再発防止策の報告</p> <p>請負者は緊急事態対応計画に基づき、事故発生の報告を次のように行わなければならない。</p> <ol style="list-style-type: none"> (1) 事故発生の第1報: エンジニアへ発生後、出来るだけ早く電話またはその他の手段で報告する。 (2) 事故の状況報告第1報: エンジニアが指定する様式の文書で、出来る限り速やかに、事故情報の第1報を報告する。 (3) 事故の原因調査・現場状況等の報告: エンジニアへ随時報告する。 	<p>1.12 Measures at the Time of Accident Occurrence</p> <p>The Contractor shall carry out the following measures when an accident occurs during construction work:</p> <p>1.12.1 Response at the Scene of Accident</p> <p>In the event of an accident, the Contractor shall immediately discontinue the work and implement the following measures as necessary.</p> <ol style="list-style-type: none"> (1) Relief activities of victims (2) Secondary disaster prevention activities (3) Conservation of accident site (4) Discontinuation of construction work related to the accident (5) Measures instructed by the Engineer <p>1.12.2 Report of Accident Occurrence, Cause Investigation Result and Recurrence Prevention Measures</p> <p>The Contractor shall report the occurrence of an accident as follows in accordance with the emergency response plan.</p> <ol style="list-style-type: none"> (1) First report of the accident: Report to the Engineer by phone or other means as soon as possible. (2) First report of the accident situation: Report the accident-related information to the Engineer on the form designated by the Engineer as 	

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<p>(4) 再発防止策等の報告:事故発生後1週間以内またはエンジニアが同意した期間以内に、エンジニアへ原因調査、再発防止策等の報告を行う。</p> <p>1.12.3 工事の再開手続き</p> <p>事故が発生した現場での工事再開手続きは以下のとおりとする。</p> <p>(1) 請負者は再発防止策を検討・立案し、エンジニアに提出する。</p> <p>(2) エンジニアは再発防止策をレビューする。</p> <p>(3) 請負者は、再発防止策の実施または実施のための具体的な準備を行った上で、エンジニアへ工事の再開申請を行う。</p> <p>(4) 請負者はエンジニアの同意を得て、工事を再開する。</p> <p>(5) 請負者は、再発防止策の有効性を検証し、エンジニアはそれを確認する。</p> <p>(6) 必要に応じて、請負者はリスクアセスメント・作業計画等の変更を実施する。</p>	<p>soon as possible.</p> <p>(3) Report on cause investigation of accident, situation on the site etc.: Report to the Engineer timely at any time.</p> <p>(4) Report on measures to prevent recurrence: Report on cause investigation and preventive measures to the Engineer within one week after the accident or within a period agreed with by the Engineer.</p> <p>1.12.3 Resumption Procedure of Construction Work</p> <p>Procedures for resuming construction work at the site where the accident occurred shall be as follows.</p> <p>(1) The Contractor examines and formulates measures to prevent recurrence and submits it to the Engineer.</p> <p>(2) The Engineer reviews the preventive measures.</p> <p>(3) The Contractor applies for resumption of work to the Engineer after making concrete preparations for implementation of the preventive measures.</p> <p>(4) The Contractor resumes the construction work with the consent of the Engineer.</p> <p>(5) The Contractor verifies the effectiveness of the preventive measures and the Engineer confirms it.</p> <p>(6) As necessary, the Contractor implements risk assessment and changes work plan.</p>	
<p>Annex 1 安全衛生計画書に記述する項目</p> <p>(1) 工事の概要</p> <p>工事の概略説明、概要が理解できる程度の平面図、その他必要な図面、主要工事項目及び数量等を記述する。</p> <p>(2) 請負者の安全衛生管理の方針</p> <p>安全衛生方針は現場における安全衛生水準の向上を図るための安全衛生に関する基本的考え方を示すものであり、通常、安全衛生の目的(労働災害の防止、作業員の心身の健康保持、等)、安全衛生管理にかかる基本の方針(法令・仕様書の遵守、請負者の要員の間での責任・権限の明確化、等)に関する記述が含まれる。</p> <p>(3) 安全衛生管理体制及び要員の責務と権限</p> <p>請負者の代理人をトップとする安全衛生管理の組織及び安全衛生管理に係わる要員の責務と権限、本社による現場の安全衛生管理への支援体制等について記述する。</p> <p>(4) 安全衛生関連の法律・基準</p> <p>工事において安全衛生管理上遵守すべき当該国の法律及び基準の一覧を記述する。</p> <p>(5) 工事の安全衛生のリスクアセスメントの方針</p>	<p>Annex 1 Items to Be Described in the Health and Safety Plan</p> <p>(1) Outline of the Work</p> <p>Outline explanation of the Work, the plan and other drawings to understand the outline, main construction items and quantity etc.</p> <p>(2) The Contractor's policy on health and safety management</p> <p>The health and safety policy indicates the basic concept of health and safety to improve the level of health and safety in the construction site. It generally includes the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with laws and regulations, clarification of responsibilities and authority among the Contractor's personnel, etc.).</p> <p>(3) Health and safety management system and responsibility and authority of personnel in charge</p> <p>Describe the health and safety management organization headed by a Contractor's Representative, the responsibility and authority of personnel involved in health and safety management, and the support system for on-site health and safety management by the head office.</p>	

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<p>安全衛生にかかるリスクアセスメントの実施方針を記述する(適用する基準(例:ISO45001)の記載、等)。</p> <p>(6) 建設機械・器具の安全対策の方針 建設機械・器具にかかる点検の概要(始業前点検、定期点検等の各種点検の実施、点検及び修理体制構築にかかる方針等)を記載する。個別具体的な建設機械・器具の点検手法や体制については安全衛生詳細計画書で記載されることが想定される。</p> <p>(7) 情報共有・コミュニケーションの方針 本仕様書 1.5 に記載の各種会議(またはその他の手段)を通じて、請負者内及び発注者、エンジニア、関係諸官庁等との情報共有・伝達を行うことを記述する。また作業員に対する安全管理活動(本仕様書 1.6(2))、作業員の安全衛生に係わる意見の聴取方法(本仕様書 1.3.4)について記載する。</p> <p>(8) 安全衛生教育・訓練の方針及び計画の概要 新規入場者教育を始めとする教育訓練の概要(対象者、時期、教材、教育者・訓練者の選定にかかる方針等)を記載する。各工事・作業の内容に応じて必要な教育・訓練の計画については、安全衛生詳細計画書で記載されることが想定される。</p> <p>(9) 安全衛生関連の設備・保護具の使用や配備の方針 安全衛生リスク低減のための設備の配備、基本的な保護具の支給・交換等の方法及び作業の特殊性による追加保護具の使用等についての方針を記述する。</p> <p>(10) 安全衛生ルール(作成のための方針) 現場における事故防止のための対策を示した安全衛生ルール(例:喫煙場所の限定、現場内での走行速度、整理整頓、等)を記載する。特定の作業で詳細なルールが必要な場合は、安全衛生詳細計画書の中で、順次定められることが想定される。</p> <p>(11) 現場の巡視計画 現場巡視の方法、実施者、頻度を具体的に示すほか、報告、記録の方法及び巡視結果の活用方法等についても記述する。</p> <p>(12) 公衆安全衛生対策の方針 近隣住民等第三者の工事区域内への立入禁止措置その他安全衛生確保のための対策の考え方と概要(入退場ゲートの設置、等)を記述する。</p> <p>(13) 交通事故対策の方針 工事現場内、工事現場周辺及び公道における請負者の作業に起因する交通事故防止のための対策の考え方と具体的対策の実施方法を記述する。</p> <p>(14) 事故発生を防止するための取り組みにかかる方針 不安全状態、不安全行動(ニアミスを含む)などの報告と改善のための取り</p>	<p>(4) Health and safety laws and standards List of laws and standards of the relevant country to be complied with in health and safety management of the Work</p> <p>(5) Policy on health and safety risk assessment of the Work Describe the implementation policy of risk assessment related to health and safety (description of applicable standard (eg ISO 45001), etc.)</p> <p>(6) Policy on safety measures for construction machinery and equipment Describe the outline of inspections for construction machinery and equipment (implementation of various inspections such as pre-work inspections and periodic inspections, policies concerning inspections and repair system). It is assumed that the inspection method and system of respective construction machinery and equipment will be stated in the Particular Health and Safety Plan.</p> <p>(7) Information sharing and communication policy Describe about information sharing and communication within the Contractor, with the Employer, the Engineers and relevant government agencies, etc. through the various meetings (or other means) stipulated in 1.6 of this Specification. In addition, describe safety management activities for workers (1.8.2 of this Specification) and method for hearing of workers' opinions regarding health and safety (1.3.4 of this Specification).</p> <p>(8) Policy and outline of plans for health and safety education and training Describe the outline of the education and training (participants, time, teaching materials, policies for selecting educators and trainers, etc.) including new-entrant education. It is assumed that the plan of education and training required according to the contents of each work will be described in the Particula Health and Safety Plan.</p> <p>(9) Policies on the use and deployment of health and safety related facilities and protective equipment Describe the policies for the deployment of facilities / equipment to reduce health and safety risks, the method of provision and replacement of basic protective equipment, and the use of additional protective equipment due to the peculiarity of the work.</p> <p>(10) Health and safety rules pPolicy for formulating) Describe safety and health rules (eg, limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site. If a specific work requires detailed rules, it is assumed that they will be determined as necessary in the Particular Health and Safety Plan.</p>	

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<p>くみ(改善策の指示・実施・記録)に関する方針を記述する。</p> <p>(15) 事故発生時の対応、再発防止策の策定方法 事故発生時の救急対応、事故報告にかかる方針について記述する。また事故原因の究明、再発防止策の立案及び実施、確認と改善策の展開方法等を記述する。</p> <p>(16) 労働衛生環境維持のための施設 休憩所、トイレ、食堂、シャワー施設、更衣室等の施設及び設備の設置、使用及び管理計画の概要を記述する。</p> <p>(17) 緊急事態対応計画 事故や災害発生等の緊急事態における被災者の救助、作業中断、緊急連絡先への通報(緊急連絡表の作成と緊急事態の種類に応じた連絡範囲・連絡手段)、関係者への連絡等の行動計画について記述する。</p> <p>(18) 救急救護計画の作成方針 現場の規模や特徴に合わせて救急救護施設、救護要員、備品・医療品等の配置計画を作成する方針について記載する。具体的な救急救護計画は安全衛生詳細計画書で定められることが想定される。</p> <p>(19) 作業中断基準 事故発生時及び強風、大雨、雪その他の要因により作業に危険が予測される場合における作業中断の基準や中断指示責任者等を記述する。</p> <p>(20) 安全衛生管理活動のモニタリングとレビューの方針 朝礼、5S活動等それぞれの安全衛生管理活動の目的、方法、時期、結果の活用及び実施状況のモニタリングとレビュー、継続的改善の方針を記述する。</p> <p>(21) 労働災害時の請負者の要員の救済 業務上被災した要員や疾病に罹患した要員への具体的救済手段に関する法律、労災保険の概要、その他の救済手段を記述する。</p>	<p>(11) On-site patrol plan Describe method of on-site patrol and its implementer, frequency. In addition, describe method of reporting, recording and method of utilizing the result of patrol result.</p> <p>(12) Policy of public health and safety measures Describe the concept and outline of no-entry to the construction areas by third parties of nearby residents (setting of entry / exit gates, etc.) and other measures to ensure their health and safety.</p> <p>(13) Policy of traffic accident prevention measures Concept and implementation of concrete measures for traffic accident prevention due to work of the Employer and the Contractor in and around the construction site and on public road</p> <p>(14) Policy for efforts to prevent accidents occurrence Describe the policy on reporting of unsafe condition and unsafe behavior (including near-miss) and improvement actions (instruction, implementation and recording of improvement measures).</p> <p>(15) Response to accident occurrence, formulating measures to prevent recurrence Describe the policy for first aid at the time of the accident and the accident report. Also describe method of investigation of causes, planning and implementation of preventive measures for recurrence confirmation and concept of developing corrective measures, etc.</p> <p>(16) Facilities and equipment for maintaining the occupational health environment Plan of facilities and equipment such as rest station, restroom, eating place, shower facility, changing room etc.</p> <p>(17) Emergency response plan Describe the action plan including rescue of victims in an emergency such as an accident or disaster occurrence, work discontinuation, notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.</p> <p>(18) Development policy of first aid plan Describe about policy to make deployment plan such as emergency relief facilities, relief personnel, equipment, medical supplies in accordance with size and features of the site. It is assumed that a specific emergency relief plan will be developed and added in the Particular Health and Safety Plan.</p> <p>(19) Work discontinuation criteria</p>	

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	<p>Criteria for discontinuation work and person responsible for instructions for discontinuing work etc. when danger is predicted for work due to strong wind, heavy rain, snow or other factors</p> <p>(20) Policy of monitoring and review of health and safety management activities</p> <p>Policies for monitoring and reviewing the purpose, method, timing, utilization of results, development, etc. of health and safety management activities such as safety patrols, morning meetings and 5S activities</p> <p>(21) Relief of Contractor's personnel at occupational accident</p> <p>Explanation of outline about the law on specific remedial measures for personnel injured/deceased by work and personnel affected by illness, summary of the workmen's accident compensation insurance and other remedies</p>																	
<p>Annex 2 危険又は有害な業務</p> <p>(1) クレーン運転業務及び移動式クレーン運転業務</p> <p>(2) アーク溶接機を用いて行う金属の溶接、溶断等の業務</p> <p>(3) フォークリフト運転業務</p> <p>(4) 車両系建設機械(整地・運搬・積み込み用及び掘削用:3t以上)運転業務</p> <p>(5) 車両系建設機械(基礎工事用:3t以上)運転業務</p> <p>(6) ローラー運転業務</p> <p>(7) 有機溶剤を使用する業務</p> <p>(8) 玉掛業務</p> <p>(9) ロープ高所作業</p> <p>(10) 高さが二メートル以上の箇所であって作業床が設けることが困難なところにおいて、墜落用制止器具のうちフルハーネス型のものを用いて行う作業にかかるとする業務</p>	<p>Annex 2 Dangerous or Harmful Work</p> <p>(1) Crane operation and mobile crane operation</p> <p>(2) Welding and cutting of metal using arc welder</p> <p>(3) Forklift operation</p> <p>(4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: 3 t or more)</p> <p>(5) Vehicle-type construction equipment operation (for foundation work: 3 t or more)</p> <p>(6) Roller operation</p> <p>(7) Operations that use organic solvents</p> <p>(8) Sling work</p> <p>(9) Rope height work</p> <p>(10) Work to be performed using a full harness type of fall prevention device where the height is 2 meters or more and it is difficult to provide for the work floor</p>																	
<p>Annex 3 危険又は有害な業務に係わる特別教育の教育科目</p> <p>(1) 移動式クレーン運転士特別教育</p> <table border="1"> <thead> <tr> <th>科目</th> <th>範囲</th> </tr> </thead> <tbody> <tr> <td>1 移動式クレーンに関する知識</td> <td>種類及び型式、主要構造部分、作動装置、安全装置、ブレーキ機能、取扱い方法、点検及び整備の方法</td> </tr> <tr> <td>2 原動機及び電気に関する知識</td> <td>内燃機関、蒸気機関、油圧駆動装置、感電による危険性</td> </tr> <tr> <td>3 移動式クレーンの運転のために必要な力学に関する知識</td> <td>力(合成、分解、つり合い及びモーメント)、重心、荷重、ワイヤロープ、フック及びつり具の強さ、ワイヤロープ</td> </tr> </tbody> </table>	科目	範囲	1 移動式クレーンに関する知識	種類及び型式、主要構造部分、作動装置、安全装置、ブレーキ機能、取扱い方法、点検及び整備の方法	2 原動機及び電気に関する知識	内燃機関、蒸気機関、油圧駆動装置、感電による危険性	3 移動式クレーンの運転のために必要な力学に関する知識	力(合成、分解、つり合い及びモーメント)、重心、荷重、ワイヤロープ、フック及びつり具の強さ、ワイヤロープ	<p>Annex 3 Subjects of Special Education for Dangerous or Harmful Work</p> <p>(1) Special education for crane operation and mobile crane operation</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Scope</th> </tr> </thead> <tbody> <tr> <td>1 Knowledge of mobile cranes</td> <td>Type and model, main structural parts, operating device, safety device, brake function, handling method, method of inspection and maintenance</td> </tr> <tr> <td>2 Knowledge about motor and electricity</td> <td>Internal combustion engine, steam engine, hydraulic drive, danger from electric shock</td> </tr> <tr> <td>3 Knowledge of mechanics necessary for</td> <td>Force (composition, decomposition, balance and moment), center of gravity, load, wire rope, hook and hook strength, relationship between wire rope</td> </tr> </tbody> </table>	Subject	Scope	1 Knowledge of mobile cranes	Type and model, main structural parts, operating device, safety device, brake function, handling method, method of inspection and maintenance	2 Knowledge about motor and electricity	Internal combustion engine, steam engine, hydraulic drive, danger from electric shock	3 Knowledge of mechanics necessary for	Force (composition, decomposition, balance and moment), center of gravity, load, wire rope, hook and hook strength, relationship between wire rope	
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1 Knowledge of mobile cranes	Type and model, main structural parts, operating device, safety device, brake function, handling method, method of inspection and maintenance																	
2 Knowledge about motor and electricity	Internal combustion engine, steam engine, hydraulic drive, danger from electric shock																	
3 Knowledge of mechanics necessary for	Force (composition, decomposition, balance and moment), center of gravity, load, wire rope, hook and hook strength, relationship between wire rope																	

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1 作業の方法に関する知識	地山の掘削の方法、浮石、埋設物等の処理、湧(ゆう)水の処理及び排水の方法、法(のり)面防護の方法、土砂及び岩石の性質、土止め支保工の種類、材料、構造、組立図、点検及び補修、土止め支保工の切りばり、腹おこし等の取付け及び取りはずしの作業に関する事項																											
2 工事用設備、機械、器	工事用設備及び機械の取扱い、電																											
Subject	Scope																											
1 Knowledge of types, structures and functions of machines and safety devices involved in work	Types, structures and functions of wood processing machines, safety devices, transport machine devices and automatic feeding devices																											
2 Knowledge of maintenance and inspection of machines and safety devices involved in work	Work environment, maintenance and inspection of wood processing machines, safety devices, etc.																											
3 Knowledge of method of work	Types of jigs and hand tools and way to use, general safety work, work standard																											
Subject	Scope																											
1 Knowledge of work method	Method of ground excavation, treatment of loose rocks and buried objects, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock, and the type, material, structure, assembly drawing, maintenance and inspection of earth shoring, matters related to installation and removal of strut																											

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知識	設計図及び工作図、建築物等の鉄骨の組立て等の作業の方法、点検		machines, instruments, work environment, etc.	protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment											
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1 作業の方法に関する知識	橋梁の種類、材料、構造、設計図及び工作図、工法の種類及び作業の方法、架設等に係る点検の方法		(11) Operation leader for wooden building assembly work												
2 工用設備、機械、器具等に関する知識	工用設備及び機械の取扱い、器具及び工具、電気		<table border="1"> <thead> <tr> <th>Subject</th> <th>Scope</th> </tr> </thead> <tbody> <tr> <td>1 Knowledge about assembling structural members of</td> <td>Construction methods of main structural parts such as frame, cabin, floor structure, framed walls, construction methods of roof and outer wall foundation, joints, order of construction,</td> </tr> </tbody> </table>		Subject	Scope	1 Knowledge about assembling structural members of	Construction methods of main structural parts such as frame, cabin, floor structure, framed walls, construction methods of roof and outer wall foundation, joints, order of construction,							
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(11) 木造建築物の組立て等作業主任者															
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1 木造建築物の構造部材の組立て、屋根下地の取付け等に関する知識	軸組み、小屋組み、床組み、枠組壁等の主要構造部分の工法、屋根及び外壁下地の工法、継手及び仕口の工法、建て方作業の方法及び順序、軸組み等の補強方法														
2 工用設備、機械、器具、作業環境等に関する知識	工用設備及び機械の取扱い、器具及び工具、電気、墜落防止のための設備、落下物による危険防止のための措置、服装の及び保護具														
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2 工用設備、機械、器具、作業環境等に関する知識	工用設備及び機械の取扱い、器具及び工具、墜落防止のための設														

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Annexes: Abbreviations and Terms and Definitions (not yet completed)

2019.04.09 調査団様式作成

和文	English (R1)	English (R2)
<p>Annex A 略語</p> <p>本仕様書で使用する略語は以下である。</p>	<p>Annex A Abbreviations</p> <p>The following abbreviations are used in this Specification.</p>	
<p>JIS 日本工業規格</p> <p>ANSI 米国標準規格協会</p> <p>BS 英国規格</p> <p>BSEN 英国規格欧州規格</p> <p>ISO 国際標準化機構</p> <p>ASTMN 米国試験材料協会</p>	<p>JIS Japanese Industrial Standards</p> <p>ANSI American National Standards Institute</p> <p>BS British Standard</p> <p>BSEN British Standard European Norm)</p> <p>ISO International Organization for Standardization</p> <p>ASTMN American Society for Testing and Materials</p>	

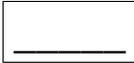
和文	英文	コメント
<p>Annex B 用語の定義</p> <p>本仕様書で使用する用語の定義は以下である。</p>	<p>Annex B Terms and Definitions</p> <p>This Annex defines the following terms for the purposes of this Specification.</p>	
<p>(1) 工事関係者:発注者の要員、請負者の要員、工事現場に入場を許可された者をいう。</p> <p>(2) 安全衛生管理者(Health and Safety Officer):契約条件書 GC6.7 に規定の事故防止責任者 (accident prevention officer)と同義である。</p> <p>(3) 作業員:元請及び下請の作業員で、GC6 で使用している労働者 (labour)</p>		

<p>と同義とする。</p> <p>(4) 施工計画書(Method Statement): 契約に基づき請負者が作成する工事全体の施工法、工程、品質、安全等について記述した書類をいう。</p> <p>(5) 作業計画書(Particular Method Statement): 請負者が工事の部分の施工にあたり実施する各工種もしくは作業の施工法、工程、品質、安全等について詳細に記述した書類をいう。</p> <p>(6) 作業主任 (Operation Leader): Annex 4 に規定する作業に関して、1.9 (1) 3)に規定する技能講習を修了し、安全な作業を指揮する能力を有すると請負者に認定された作業員をいう。</p> <p>(7) 基準日 (ベースデート): GC1.1.3.1 に定義されている入札の提出の最終日より 28 日前の日付を言う。</p> <p>(8) 5S活動: 安全で健康な職場づくり、そして生産性の向上をめざす活動で、整理 (Seiri)、整頓 (Seiton)、清掃 (Seisou)、清潔 (Seiketu)、躰 (Situke)を行うこと。(厚生労働省安全衛生キーワード http://anzeninfo.mhlw.go.jp/yougo/yougo_index01.html より)</p> <p>(9) 危険予知 (KY) 活動: 作業や職場にひそむ危険性や有害性等の危険要因を発見し解決する能力を高める活動。KYは、危険のK、予知のYとつたもの。(厚生労働省安全衛生キーワードより)</p> <p>(10) モニタリング: システム、プロセス又は活動の状況を明確にすること(注: JISQ45001-2008 より)</p>		
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2 A

2.1 A

2.1.1 A



**JICA STANDARD SAFETY
SPECIFICATION FOR PROJECT
IMPLEMENTATION UNDER
JAPANESE GOVERNMENT ODA**

Indicative Only



**Japan International Cooperation Agency
(JICA)**

_____, 2020

Prepared: NK
Issue: Internal partial and indicative draft only, not for formal issue
Revision: 0
Date: 07/06/2019

(NK please note that this requires a full legal check and revision/correction - the following is presently only our basic suggestion)

Acknowledgements

JICA acknowledges that they have referred to other available published documentation during the preparation of this JICA Specification and parts of such other documentation may have been used within this document. JICA hereby expresses its appreciation to the other publishers whose relevant documents include:

- 1) Japanese Regulations (please list in detail)
- 2) OSHA Standard Part 1926 Safety and Health Regulations for Construction, published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A.
- 3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.
- 4) Conditions of Contract for Construction For Building And Engineering Works Designed By The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC),

(NK - Please confirm as above and insert a comprehensive list of all other source or reference documents that have been used)

OVERALL INDEX

Overall index to insert here covering all Chapters

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL

**Japan International Cooperation Agency
(JICA)**

Prepared: NK
Issue: Internal partial and indicative draft only, not for formal issue
Revision: 0
Date: 07/06/2019

NK This has not yet been updated but will be after content is finalised

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Safety Declaration

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 - 1.1.2 Purpose
 - 1.1.3 Scope of Application
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 - 1.2.2 Reference Standards
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Probably insert Bidders Safety Declaration (Form BSD)

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- Annex 2 Dangerous or Harmful Work
- Annex 3 Subjects of Special Education for Dangerous or Harmful Work
- Annex 4 Works Requiring to Appoint Operation Leader
- Annex 5 Subjects of Skill Training Course

General Application Notes:

1. JICA desire to significantly improve health and safety on all projects covered by the JICA international aid and assistance programmes through the implementation of improved safety measures, aiming to achieve a zero accident rate across all projects.
2. JICA have therefore prepared this standard safety specification containing detailed reference specifications, standards and procedures, and they require this to be used by and complied with by all project proponents (employers and their consultants, all bidders/contractors) on a comprehensive and consistent basis. All parties involved in relevant projects shall apply these safety practices under the slogan of “Safety First”.
3. This JICA Standard Safety Specification has been published on-line in the JICA website and it shall become effective and be incorporated by project employers and their consultants into the Bidding and Contract Documents for particular projects as and when the Loan Agreement (LA) for such particular projects has been executed and where such agreement specifically contain express mutual agreement between donor and recipient governments to adopt this JICA Standard Safety Specification as a basis for Health and Safety Management on that project.
4. The JICA Standard Safety Specification is available on the JICA’s web site shown below:
http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/oda_op_info/guide/tender/index.html
A copy of the JICA Standard Safety Specification is not attached to Bidding or Contract Documents.
5. Unless otherwise agreed by JICA and the executing agency of particular on-going JICA funded projects and also between the Employer and Contractor on those projects, this JICA Standard Safety Specification shall not be applied to such projects
6. In order that this JICA Standard Safety Specification can become an integral part of the Bidding and Contract Documents for particular projects and so that the requirements can therefore be implemented immediately after publication of this document on the JICA website, the particular instructions for alteration of the Bidding and Contract documents by (project employers and consultants) are contained within this document in Chapter 1, General, Sub-Clause ____ following. After making such modification to documents for particular projects, the JICA Standard Safety Document shall be read and construed as a part of the Bidding and therefore Contract Documents for that project.
7. It is the ultimate intention of JICA to formally update the separate “Standard Bidding Documents under Japanese ODA Loans” by incorporating the same instructions however in the meantime relevant changes shall be made in accordance with this Standard Safety Specification.
8. The JICA Standard Safety Specification prescribes minimum requirements and the parties are free to include higher standards when so agreed between Contractor, Employer and Engineer.
9. These General Notes are to be read and construed as an integral part of the JICA Standard Safety Specification.

コメントの追加 [J1]: JICA’s L/A usually doesn’t mention such technical documents. The concrete way to introduce JSSS into actual JICA’s funding operations is under consideration.

コメントの追加 [J2]: Would you please elaborate on this?

コメントの追加 [J3]: ditto

コメントの追加 [J4]: We consider that this note is addressed to the Employers, Contractors and Consultants, but in particular to the Employers who are issuers of the bidding documents (isn’t it?). Then, we find better to say “when the Employer seeks for higher safety level.”

Internal Notes for further consideration or action:

In relation to on-going projects, can JICA please confirm if it is the intention to apply the

JSSS is necessary to newly apply. If it is to be contemplated, please note that it may possibly involve additional cost and time. Also note that issue of new or revised JSSS could not automatically be applied under GC13.7, Adjustments for Changes in Legislation, it would probably require the issue of a Variation under GC13.1.

コメントの追加 [J5]: Our stance on the on-going projects is not to push when difficult to do so. We may reasonably invite the Employers to consider to apply JSSS if the bidding documents are not yet drafted, for example.

NK:

Employers Safety Declaration is not necessary as the content is now covered by General Notes, 1. and 2. above. A Bidder's Safety Declaration has been prepared (see last page)

I have not at this stage edited and coordinated all of the definitions but this is necessary and some additional Contract definitions will be required.

I have lined up some wording in the same manner as GC.

Please check and confirm if formatting is acceptable

1 General

1.1 General

1.1 Definitions

1.1.1 In this JICA Standard Safety Specification the following words and expressions shall have the meanings stated.

NK The following still requires coordination and editing by me later. I have lined up some wording to follow GC but more is required.

- (1) **“Persons related with the Work”** means the Employer’s personnel, the Contractor’s personnel and persons authorized to enter the construction site
- (2) **“Health and Safety Officer”** means the health and safety officer (to be appointed under Sub-Clause 6. 7 [Health and Safety]);
- (3) **“Worker”** means Workers of the main contractor and subcontractors, synonymous with labour used in GC6.7 of the General Conditions
- (4) **“Method Statement”** means a document that shows the details of the arrangements, methods and resources which the Contractor proposes to adopt for the execution of the Works or any part of the Works
- (5) **“Particular Method Statement”** means a document that describes in detail the construction method, schedule, quality, safety, etc. of each work type or work performed by the Contractor
- (6) **“Operation Leader”** means a worker who is certified as capable of directing safely the works specified in Annex 4 finishing the skill training course specified in 1.9 (1)(c) of this Specification.

Other definitions require to be added, such as:

- (7) **“JICA Standard Safety Specification”** or **“JSSS”** means the document of this title published officially by JICA on their website, issue number __ dated ____.
JICA please confirm the above is acceptable or advise alternative
- (8) **“Safety Plan”** means a document that shows the details of the safety arrangements, methods and resources which the Contractor proposes to adopt for health and safety throughout the execution of the Works or any part of the Works.
Safety Plan shall also means the “health and safety plan” and “safety plan” referred to as such in JSSS and the remaining documents contained in the Contract.

Additional MD to consider and include further additions

コメントの追加 [J6]: If your intention is to introduce this wording in the Conditions of Contract too (instead of “accident prevention officer”), we are reluctant to do so. We have already decided to continue to use FIDIC MDB for the time being. Then, we would like to keep the wording and structure of FIDIC MDB wherever possible. The definition given in the current draft of JSSS (Health and Safety Officer is synonym of accident prevention officer) is preferred.

Definition and use of “Safety Plans” to consider further

- 1.1.2 JSSS will become a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction For Building and Engineering Works Designed By The Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions and where applicable the Particular Conditions, shall apply to this Safety Specification.
- 1.1.3 JSSS has been drafted essentially to apply to JICA Loan Projects and the Conditions of Contract as noted in the previous Clause.
- 1.1.4 JSSS shall also apply to all projects under different forms of contract including those under Contractor design contract and contract forms under the JICA Grant Aid programme. When so used, suitable modification will be required to the definitions and text of JSSS document and the bidding documents for those projects to ensure compatibility and consistency with the relevant contract requirements for the project, reflecting the same intentions, standards and procedures for improving safety.

Delete 1.1.2 “Purpose”, as this is now covered by the General Notes

1.2 Alterations to the Bidding Documents and Conditions of Contract to Include JSSS as a part of the respective Contracts

[Note that this Clause applies to executing agencies, employers and their consultants for information in the preparation of Bidding and Contract Documents]

- 1.2.1 Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Safety Plan, page BF-33.

Delete “[Insert Safety Plan]” and in this place insert the following:

“Prepare and include full details here of the Bid Stage Safety Plan according to the detailed requirements stated in JSSS Sub-Clause 1.3.3 Bid Stage Safety Plan, clearly listing and describing and reflecting all items listed in this Clause.

NK and JICA please confirm if the Bidders Declaration is required, I assume that it is and have prepared a suggested rough draft (refer to the last page). If required then suitable editing and additional detail is required.

- 1.2.2 Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section III. Evaluation and Qualification Criteria, 1. Evaluation, 1.1 Evaluation of Technical Bids.

In the paragraph stating *[Evaluation of the Bidder’s Technical Proposal will include an assessment of the Bidder’s technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI, Works Requirements.]*

Insert “and Safety Plan” in the third line after the words, “work methods”.

Insert the following additional sentence at the end of the above paragraph “*Evaluation of the safety plan shall take account of the Health & Safety Officer in 1.1.2 Personnel and of safety equipment from the Safety Plan in 1.1.3 Equipment.*” after the words “in Section VI, Works Requirements.”

コメントの追加 [J7]: Let’s talk on this more. we are afraid that the degree of “fullness” is differently understood between us.

1.2.3 Part 1 – Bidding Procedures, Section I. Instructions to Bidders Section III. Evaluation and Qualification Criteria against 1.1.2 Personnel,

Delete positions 2 and 3 as stated and insert as follows:

- 2 **Health and Safety Officer**
- 3 *Other personnel to be inserted as appropriate*

コメントの追加 [J8]: Please see above.

1.2.4 Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

To include the Contract reference and procedures for review of Method Statements and Safety Plans, which is not presently included in FIDIC

Sub-Clause 4.1 Contractor's General Obligations	Delete that part of the fifth paragraph of this Sub-Clause which states: “ The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. ” and in this place insert: <ul style="list-style-type: none">(a) The Contractor shall, whenever required by the Engineer, and in any event at least 21 days before commencing relevant parts of the Works submit Method Statements and Safety Plans which the Contractor proposes to adopt for the execution of the Works or the relevant parts of the Works.(b) The Engineer may review the Method Statements and/or Safety Plans and may give notice to the Contractor stating the extent to which the Method Statement and /or safety Plan does not comply with the Contract. Within 14 days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no such notice within 21 days of the date of receipt of the Method Statement and/or Safety Plan the Engineer shall be deemed to have given his consent and Contractor shall proceed in accordance with the Method Statement and/or Safety Plan subject to his other obligations under the Contract.(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within 7 days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice within 14 days of the date of receipt of the
--	---

コメントの追加 [J9]: These things are mostly included in the JSSS, and we don't believe necessary to state them in the Conditions of Contract.

	<p>resubmission the Engineer shall be deemed to have given his consent and Contractor shall proceed in accordance with the resubmitted Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(d) The Contractor shall submit a revised Method Statement and/or Safety Plan whenever required by the Engineer or when any previous Method Statement and/or Safety Plan is inconsistent with actual conditions or requirements prevailing at the Site in accordance with the requirements described in items (a) to (c) above.”</p>
--	---

1.2.4 Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

(To render the JSSS as a part of the Contract and to include the wider requirements for safety now prescribed by FIDIC second edition:

<p>Sub-Clause 4.8 Contractor's Health and Safety Obligations</p>	<p>Delete this Sub-Clause completely and replace with the following:</p> <p>“The Contractor shall:</p> <ul style="list-style-type: none"> (a) comply with all applicable health and safety regulations and Laws; (b) comply with all applicable health and safety obligations specified in the Contract including the those contained in JSSS which as an entire document is to be read and construed as an integral part of the Particular Conditions of Contract by virtue of this amendment; (c) comply with all directions issue by the Contractor's Health and Safety Officer (appointed under Sub-Clause 6.7 [Health and Safety]; (d) take care of the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed; (e) keep the Site, Works (and the other places (if any) where the Works are being executed) clear of unnecessary obstruction so as to avoid danger to these persons; (f) provide fencing, lighting, safe access, guarding and watching of: <ul style="list-style-type: none"> (i) the Works, until the Works are taken over under Clause 10 [Employer's Taking Over]; and (ii) any part of the Works where the Contractor is executing outstanding works or remedying any defects during the Defects Notification
---	---

コメントの追加 [J10]: Worth considering, although, as mentioned before, we would like to keep the contents of FIDIC MDB as long as possible.

	<p style="text-align: center;">Period; and</p> <p>(g) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land and property.</p> <p>Within 21 days of the Commencement Date and before commencing any construction on the Site, the Contractor shall submit to the Engineer for information a Safety Plan (based upon the Bid Stage Safety Plan) specifically prepared for the Works, the Site and other places (if any) where the Contractor intends to execute the Works. This Safety Plan shall be in addition to any other similar document required under applicable health and safety regulations and Laws.</p> <p>The Safety Plan shall set out or refer to all the health and safety requirements:</p> <p>(i) stated in JSSS and the Specification;</p> <p>(ii) that comply with the Contractor's health and safety obligations under the Contract; and</p> <p>(iii) that are necessary to effect and maintain a healthy and safe working environment for all persons entitled to be on the Site and other places (if any) where the Works are being executed.</p> <p>This Safety Plan shall be revised as necessary by the Contractor's Health and Safety officer, or at the reasonable request of the Engineer. Each revision of the Safety Plan shall be submitted promptly to the Engineer.</p> <p>In addition to the reporting requirement of sub paragraph (g) of Sub Clause 4.21 [Progress Reports] the Contractor shall submit to the Engineer details of any accident as soon as practicable after its occurrence and , in the case of an accident causing serious injury or death, shall inform the Engineer immediately.</p> <p>The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of persons and any damage to any property.”</p>
--	--

1.2.4 Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

(To change the accident prevention officer at the Site to the Health and Safety Officer and define this):

Sub-Clause 6.7	In the second paragraph, delete the words “accident
-----------------------	---

Health and Safety	prevention officer at the Site” and insert “Health and Safety Officer”
--------------------------	--

コメントの追加 [J11]: Please see above.

Consider also:

Stop working instructions

Others

コメントの追加 [J12]: Would you please elaborate on this?
Is this an action by the Engineer or HSO?

Where the Standard Safety Specification refers to the standards and regulations of other countries, such reference is to the technical requirements only of such standards and regulations and not the related laws and legal enforceability of any of those other countries.

1.1.3 Scope of Application

Not yet revised

**This is a Sample Bidding Form which IF REQUIRED
can be attached as a additional Annex to Chapter 1 General**

Form BSD

BIDDERS SAFETY DECLARATION

The Japan International Cooperation Agency (JICA) require that high safety standards be pursued on all JICA aided projects with the intention of attaining a zero accident rate.

The Bidder hereby declares his complete understanding and acceptance of the JICA aim to achieve a zero accident rate on the proposed Works and accepting the obligations placed upon him by the Conditions of Contract he hereby confirms that he will remain responsible for ensuring that the Site is set up and maintained as a safe workplace for the Employer's Personnel and the Contractor's Personnel and any other persons entitled to be thereon that may be affected by operations thereby and that the Contractor is aware and accepts to follow all of the relevant health and safety laws and regulations of the Country and the requirements of this Standard Safety Specification, whichever provide the highest safety standard (NK to be further considered ---- in the opinion of the Engineer .

Irrespective of any Laws and the enforcement or otherwise of same within the Country, the Bidder hereby declares that he has given full, careful and independent consideration, fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works of all necessary Contractor's Equipment, Personal Protective Equipment, Temporary Works and other safety resources to improve the actual safety standards on the Works to a higher level than likely to be encountered in the Country. The Bidder further declares that all Works shall be carried out under the control of qualified expert foreign safety management and supervision. The Bidder further declares that where not available in the Country, he will import the latest internationally acceptable new safety equipment, Personal Protective Equipment, Temporary Works and most up to date and appropriate Contractor's Equipment that would be used internationally (for example would be used in Japan) such as traditional steel scaffolding or steel system scaffolding etc. and/or mechanical equipment (such as cherry pickers, hydraulic platforms, elevators, conveyors, etc.) and that same will be used for the purpose intended. The Contractor also declares that the Safety Equipment, Personal Protective Equipment, Temporary Works and Contractor's Equipment shall be fit for purpose and any which may be deemed to be inappropriate, old, unsafe or inefficient will not be brought upon the Site and will otherwise not be used for the wrong purpose or will be removed from the Site if so mobilised without the Engineer's knowledge, following the Engineer's instructions at the expense of the Contractor.

The Bidder further declares that he shall find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on Personal Protective Equipment to eliminate or reduce risks.

The Bidder further declares that he (and his subcontractors) shall:

1. Employ workers with appropriate skill, qualification and capability,
2. Fully inform workers about hazards,
3. Provide health and safety training to all workers in a language and vocabulary they can understand.
4. Keep accurate records of work-related injuries and illnesses.

コメントの追加 [J13]: We have the impression that this declaration is addressed to JICA. But, in our sense, it should be addressed to the Employer.

コメントの追加 [J14]: More diplomatically correct, please.

コメントの追加 [J15]: Do we need this word?

コメントの追加 [J16]: Should we say "New", here?

コメントの追加 [J17]: ditto

5. Perform tests in the workplace, such as air sampling as required by JICA standards.
6. Provide required new personal protective equipment at no cost to workers and ensure that this is used properly and kept in good condition,
7. Provide eyesight and hearing exams or other medical tests required by JICA standards.
8. Post injury and illness data where workers can see them.
9. Notify the Engineer and Employer and other statutory authorities within 8 hours of a workplace fatality or within 24 hours of any work-related accident
10. Not retaliate against workers for using their rights under prevailing law of these JICA Health and Safety Requirements, to report a work-related accident, injury or illness.

コメントの追加 [J18]: JSSS?

コメントの追加 [J19]: JSSS ?

コメントの追加 [J20]: We think something is wrong here. Let's talk on this more.

These requirements and this declaration shall apply fully to all of the Bidder's subcontractors, suppliers and specialists for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if he is successful with his Bid, the Contractor's Health & Safety Officer at Site, named below and also included in "part xxxx Key Personnel", shall be assigned from the Commencement Date full time upon the Site of the Works and shall not be replaced or substituted at any time except with the express approval in writing of the Engineer.

If our Bid is accepted we agree that this Declaration together with all other documents comprised in our Bid Safety Plan shall form a part of the signed Contract with the Employer, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

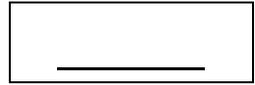
Signed: _____
(Contractor's Official Representative)
Name: _____

Signed: _____
(Contractor's Proposed Health and Safety Officer at Site)
Name: _____

Date: _____

Date: _____

Company Stamp



**JICA STANDARD SAFETY
SPECIFICATION FOR PROJECT
IMPLEMENTATION UNDER
JAPANESE GOVERNMENT ODA**

UPDATED DRAFT



***Japan International Cooperation Agency
(JICA)***

_____, 2020

Prepared: DCI for NK
Issue: 1
Revision: 0
Date: 20/07/2019

NK please note that the following is a basic suggestion that requires your further study and legal review with appropriate revision/correction.

The disclaimer is based in part on the FIDIC Documents

ACKNOWLEDGEMENTS

JICA have made reference to other available published documentation during the preparation of this document and parts of such other documentation have been used in the preparation hereof. JICA expresses its appreciation for the use of all such other publications including:

- 1) *Japan Ordinance on Industrial Safety and Health (NK please list further acts and ordinances in detail)*
- 2) *OSHA Standard Part 1926 Safety and Health Regulations for Construction, published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A.*
- 3) *Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.*
- 4) *ICE - temporary works design? And others (scaffolding?)*
- 5) ~~4) Conditions of Contract for Construction For Building And Engineering Works Designed By The Employer published by Fédération Internationale des Ingénieurs Conseils (FIDIC).~~ *NK I think it better if this is not included. I have used FIDIC second edition for reference (GC4.8) but have not used it extensively.*

(NK - Please confirm as above and insert further items as necessary to make this list comprehensive)

DISCLAIMER

JICA has prepared and issued this document in good faith for the reference of project teams engaged under the Japanese ODA programme. JICA intends that this document should represent a comprehensive guide for health and safety management on its construction projects, however JICA, (together with its consultants and other assistants engaged in the preparation hereof) will not accept or assume any liability or responsibility for any events or the consequences thereof deriving from the use of this document. The document is provided without any express or implied warranty, including without limitation, warranties of accuracy, fitness for purpose in general or in particular locations and non-infringement. This document is intended to provide general reference and shall not be relied upon in a specific legal situation or issue.

JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

NK: All numbering to check

If numbers are not used, explain why (e.g. Future issue etc.)

What about health issues? Statistically this is the biggest problem but there is really no mention

Chapter	Section	Clause
Employer's declaration		-
1. General Requirements		
2.General Safety Measures	2.1	Working site environment
	2.2	Risk control around the site
	2.3	Prevention of outsiders entering This is usually termed Site Security and is governed by GC4.22
	2.4	Watching man and Signal man
	2.5	Fall prevention
	2.6	Falling objection
	2.7	Measures against extraordinary weather
	2.8	Fire prevention
	2.9	Nil
	2.10	Safety site management
		2.10.1 Information to Workers
		2.10.2 Appointment of Operation Leader
		2.10.3 Duty of the Operation Leader
		2.10.4 Life saving equipment for Works on Water
		2.10.5 PPE
3. Underground objects and Overhead power lines	3.1	Underground objects
	3.2	Overhead power lines
4 Construction Equipment	4.1	General requirement
	4.2	Operation
	4.3	Transportation
	4.4 to 4.5?	
	4.6	Rental equipment
5. Transportation	5.1	General
	5.2	Truck
	5.3	Conveyors
6. Lifting and Sling Works		-
	6.1 General	
	6.2 Lifting works	6.2.1 Mobile cranes
		6.2.2 Other Cranes
	6.3 ???	6.3 6. Lifting and Slings

7. Temporary Works	7.1	General
	7.2	Earth retaining and support earthworks??
	7.3	Coffering
	7.4	Scaffolding
	7.5	Walkway
	7.6	Work stages
	7.7	Temporary equipment
	7.8	Power facilities
	7.9	Welding works
8. Earth Works	8.1	General
	8.2	Manpower excavation
	8.3	Machine excavation
	8.4	Embankment
	8.5	Blasting
9. Foundation works	9.1	General
Why separate? Covered by 8 and 10 surely unless only Piling	9.2	Precast piling in-situ??, bored??
	9.3	Machine excavation foundation
	9.4	Open caisson Earthworks?
		Basements and waterproofing
10. Concrete Works	10.1	Reinforcement Reinforcing bars works
	10.2	Formwork
	10.3	Concrete works in-situ/precast/prestressed??
11. River Works	11.1	Diving works
		Coffer dams??

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL

PART A: PREAMBLE NOTES

A1. Purpose and Objective:

JICA require that all parties engaged upon their ODA projects shall endeavour to establish and maintain a culture and environment where health and safety achievement is of the highest priority for all involved parties. The common goal shall be to achieve a zero accident rate, adopting the slogan of “Safety First”.

To assist with this objective, JICA have prepared and published this JICA Standard Safety Specification (hereinafter referred to as “JSSS”), which they hope will be adopted for future selected projects, by agreement with the executing agencies and their consultants on such projects.

A2. Effectiveness

JSSS has been published on-line by JICA and it shall become effective and be incorporated by project employers and their consultants into the Bidding Documents (and therefore Contract) for particular projects on the date that the Loan Agreement (LA) for that project has been executed and where the parties to such LA have formally agreed to adopt JSSS as the technical basis for Health and Safety management on that project.

It is not intended to include or attach a hard copy of JSSS to Bidding Documents or the Contract for respective projects but a copy of JSSS shall be available on the JICA’s web site shown below:

[http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/_____](http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/)

A3. Incorporation of JSSS into Contracts

JICA require that the Employer, Engineer and Contractor will each print a hard copy of JSSS for their own reference and use and that all of these entities shall fully inform their personnel, subcontractor’s, sub-consultants, other all parties who are associated with the particular project of the existence, content and purpose of JSSS and the objectives thereof.

Reference to JSSS and incorporation of the required amendments into the Bidding Documents for any project and reference to JSSS on the website will be sufficient to deem incorporation of JSSS into the Contract for that project.

Unless otherwise agreed by JICA and the executing agency of currently on-going JICA funded projects and between the Employer and Contractor(s) on those projects, this JICA Standard Safety Specification shall not be applied to such projects.

Further updates and revisions to JSSS unless otherwise agreed with the Employer will be applied from the date that same are published

In order that this JICA Standard Safety Specification can become an integral part of the Bidding Documents for particular projects and so that the requirements can therefore be implemented immediately after online publication of this document, the particular instructions for alteration of the Bidding Documents by project employers and consultants are contained within this document in Part C of this Chapter 1: General. After making such modification to Bidding Documents for particular projects, the JICA Standard Safety Document shall be read and construed as a part of the Bid and therefore the Contract for that project.

It is the ultimate intention of JICA to formally update the separate “Standard Bidding Documents under Japanese ODA Loans” by incorporating the same instructions however in the meantime relevant changes shall be made in accordance with this Standard Safety Specification.

A4. General Requirements

JSSS shall not alter or limit a contracting party's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of Contracts.

Compliance with the JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.

Contractors shall ensure that all health and safety hazards and risks are properly identified, assessed, controlled and evaluated prior to commencement of any work. Only applicably competent persons may perform the specified activities. Where the Laws of the Country so state, the Health and Safety Officer (as defined herein) shall be qualified and legally registered as such in accordance with such Laws.

Similarly JSSS shall not limit or restrict the Contractor to the scope contained herein.

JSSS is an abbreviated document and therefore as a general rule, where JSSS contains insufficient or no technical regulations or detailed requirements then the related technical regulations of the Occupational Safety and Health Administration, (published by the United States Department of Labor and hereinafter referred to as OSHA) shall apply.

If any ambiguity or discrepancy is found in JSSS, the Engineer shall issue any necessary clarification or instruction.

The JICA Standard Safety Specification prescribes minimum requirements and the parties are free to include higher standards when so agreed between Contractor, Employer and Engineer.

All Parts (A, B and C) of this Chapter 1: General, are to be read and construed collectively as integral parts of JSSS and they therefore constitute integral parts of the Contract for the Project.

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL

PART B: TECHNICAL REQUIREMENTS

1.1 Employer's Safety Declaration

By entering into a Contract, the Employer (together with the Engineer acting as his consultant) declares that he shall collaborate in good faith with the Contractor and take all reasonable measures within his authority and under his control to promote the highest achievable health and safety standards in the execution of the Works all in accordance with his contractual and statutory responsibilities and adopting the slogan:

“SAFETY FIRST”

The Contractor shall aim to achieve “Zero Accident” in the execution of the Works taking full responsibility for the health and safety management of the Works, adopting JSSS that specifies the minimum safety requirements that the Contractor shall implement.

A Bidder's Safety Declaration has been prepared and is included in Part C of this Chapter 1: General.

1.2 Definitions and Abbreviations

1.2.1 In this JICA Standard Safety Specification the following words and expressions shall have the definitions stated.

- (1) **“Health and Safety Officer”** or **“HSO”** means the Contractor's health and safety officer at Site to be appointed by the Contractor in accordance with PC6. 7 [*Health and Safety*] and named by the Bidder in his Bid.
- (2) **“Method Statement”** means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in PC4.1 [*Contractor's General Obligations*].
- (3) **“JICA Standard Safety Specification”** or **“JSSS”** means the document of this title published officially by JICA on their website, issue number __ dated ____ and as may be modified in part or in whole by the Bidding Documents for the Project.
- (4) **“Safety Plan”** means a document that contains the risk assessments and shows the details of the safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety throughout the execution of the Works or any part of the Works, as referred to in PC4.1 [*Contractor's General Obligations*].
“Safety Plan” shall also mean the “occupational health and safety plan”, “health and safety plan” and “safety plan” all described as such in JSSS and other documents contained in the Contract. *This is not necessary if references are consistent*
- (5) The phrase “health and safety” shall be construed as covering “occupational health and safety”.
- (6) **“Project”** means the particular Works and services to be implemented by the Borrower and described in the agreement with and utilising the funds provided by the Bank under the terms mutually agreed for that purpose.
- (7) **“GC”** and **“PC”** followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (8) **“OSHA”** means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A..

- (9) Unless otherwise evident from the text, reference in OSHA to “team leader”, “on-site supervisor”, “On-site supervision”, “Field superintendent”, “work chief” and the like shall be collectively construed as reference to “the Contractor’s Representative” and reference to the “safety and health manager of the contractor” and the like shall be collectively construed as reference to the Contractor’s “Health and Safety Officer”. “The construction plan and safety and health plan”, shall be construed according to the terms for such similar documents required by the Contract.
- (10) If any ambiguity or discrepancy is found in the OSHA documents, the Engineer shall issue any necessary clarification or instruction.
- (11) Any reference to “Contractor” within this document shall also be deemed to include “all Subcontractors”, for whom the Contractor shall remain fully responsible.
- (12) JSSS shall form a part of the Contract for the Project and therefore the definitions contained in the Conditions of Contract for Construction For Building and Engineering Works Designed by the Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally to JSSS.
- (13) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (14) “**Formwork**” means temporary containment structures for in-situ concrete and its immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.

1.2.2 In this JICA Standard Safety Specification the following abbreviations shall have the meanings stated.

JIS	Japanese Industrial Standards
ANSI	American National Standards Institute
BS	British Standard
BSEN	British Standard European Norm)
ISO	International Organization for Standardization
ASTM	American Society for Testing and Materials

1.3 Scope of Application

1.3.1. JSSS has been drafted to apply to JICA ODA Loan Projects and to the relevant Conditions of Contract for Construction For Building and Engineering Works Designed By The Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions.

JSSS shall also apply to other JICA assisted Projects that have been awarded under different forms of contract including those under Contractor design contracts and contracts under the JICA Grant Aid programme.

When so used, suitable modification shall be required to the definitions and text of JSSS and the Bidding Documents for those Projects to ensure compatibility and consistency with the relevant contract requirements for the project, reflecting the same intentions, standards and procedures for improving safety.

1.4 Laws and Reference StandardsThe Contractor shall comply with the Laws of the Country, including all health and safety standards.

1.4.2 If the Employer has formally agreed with JICA to adopt JSSS for the Project, then the technical requirements of JSSS shall apply and these shall prevail over the technical requirements of Laws of the Country without altering or limiting the Contractor's legal duties and obligations under such Laws.

Otherwise where the Laws of the Country (including any health and safety standards) are silent on particular health and safety requirements and where provisions are included in JSSS then JSSS shall apply and prevail.

1.4.3 In any event, if the Contractor ascertains that any part of JSSS is of a lesser standard to any of the particular Laws of the Country, then the Contractor shall inform the Engineer and shall then comply with the particular Laws of the Country (including any occupational health and safety standards).

1.4.4 The reference standards used in JSSS can be substituted with alternative standards after requesting and obtaining the consent of the Engineer who may give such consent only if in his opinion such alternative standards provide an equivalent or higher standard of health and safety than that required by JSSS.

1.4.5 Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used shall be that applicable at the Base Date.

1.4.6 Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.5 Contractor's Safety Certification

NK please confirm if this certification is required and if so is it to be a Bid Qualification requirement (we do recommend that it is). Refer to Part C where I have made this optional

1.5.1. Unless otherwise expressly stated in the Bidding Documents, the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

1.5.2. An original or authorised true copy of the current certification shall be submitted with the Bid (refer to Chapter 1: General, Part C, item C.2. (5)) and shall subsequently be included with the Contract.

1.5.3. The Contractor shall submit original or authorised true copies of all current updates to the Engineer when due.

1.6 Safety Plan

1.6.1 The Contractor shall be required to submit an overall Safety Plan at two stages:

- (1) Safety Plan at Bid Stage
- (2) Safety Plan at Commencement Stage

In addition the Contractor shall provide such further overall or updated or particular Safety Plans as may be necessary due to current circumstances or conditions at the Site or as required by the Engineer in accordance with PC4.1 [*Contractor's General Obligations*]

1.6.2 Safety Plan at Bid Stage: for requirements refer to JSSS Chapter 1: General, Part C: Required Amendments to The "JICA Standard Bidding Documents".

1.6.3 Safety Plan at Commencement Stage:

NK – this is revised to incorporate some of the requirements of FIDIC second edition clause 4.8

“Particular Safety Plans” are not necessary and have no meaning when the following is considered in conjunction with revised clause 4.8 (see Part C, item C.6 and C.7)

Consider if this should be “plan” or “manual” at commencement?

- (1) Within 28 days of the Commencement Date and not less than 21 days before commencing any work at the Site, the Contractor shall submit to the Engineer for information a Safety Plan showing the Contractor’s proposed safety management polices, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works, in the comprehensive detail required by the Bidding Documents and Annex 1 to this Chapter 1: General, Part B. This shall be based upon the Safety Plan submitted at Bid Stage developed as necessary to provide the full information required.

This Safety Plan shall be in addition to any other similar document required under applicable health and safety Laws of the Country.

- (2) The Safety Plan shall set out or refer to all the health and safety requirements:
 - (a) That are stated in JSSS;
 - (b) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and
 - (c) that are necessary to effect and maintain a healthy and safe working environment for all persons entitled to be on the Site and other places (if any) where the Works are being executed.
- (3) Requirements for submission by Contractor and response (if any) by the Engineer, shall be in accordance with PC4.1 [Contractor’s General Obligations]
- (4) The Safety Plan (or parts of it) shall be revised or supplemented where considered necessary by the Health and Safety Officer, or at the reasonable request of the Engineer. Each revision of the Safety Plan shall be submitted promptly to the Engineer in any event not less than 21 days before commencing any parts of the Works at the Site, such that the Engineer is made aware in writing of at least the following information for each part of the Work:
 - (a) Work outline and work procedure
 - (b) Safety management system and responsibility and authority of personnel
 - (c) Risk assessment
 - (d) Safety measures
 - (e) Personal Protective Equipment (PPE) for the Contractor’s personnel
 - (f) Safety education and training of the Contractor’s personnel and Tool Box Meeting (TBM)
 - (g) Teaching materials used in education, training and pre-operation TBM before work
 - (h) Method of information sharing and communication among the Contractor’s personnel
 - (i) Implementation and monitoring of measures for health and safety management
 - (j) Emergency response
 - (k) First aid response

- 1.6.4 If items other than the above are necessary due to the nature of work, the contents of this Specification shall be supplemented by referring to the provisions of the work concerned.
- 1.6.5 The Contractor shall also consider the opinions of the Contractor's Personnel in preparing all Safety Plans.
- 1.6.6 In performing risk assessments the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on Personal Protective Equipment.
- 1.6.7 The Contractor shall ensure that all of the Contractor's Personnel and Employer's Personnel are fully informed of all hazards and risks on the Site.

Included elsewhere?: Clear signage shall be exhibited to warn all such personnel and any others that are likely to be on the Site whether legitimately or otherwise of all potential hazards and risks.

- 1.6.8 The procedural flow of risk assessment shall be as follows.
- (1) Identifying
 - (2) Evaluating
 - (3) Determining measures for avoidance or reduction
 - (4) To avoid further risks by or during the execution of the Works

1.7 Contractor's Health and Safety Management Staff

1.7.1 Health and Safety Officer

- (1) If the Contractor's Health and Safety Officer at the Site (HSO) has been named in the Bid or Contract, the Contractor shall assign that named HSO upon the Works and prior to the Commencement Date.
- (2) If the HSO has not been named in the Bid or Contract, the Contractor shall, prior to the Commencement Date, submit to the Engineer for consent, the name and particulars of the person the Contractor proposes to appoint as HSO. If consent is withheld or subsequently revoked in terms of GC6.9 [*Contractor's Personnel*], or if the appointed person fails to act as HSO, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.
- (3) The HSO shall be an employee of the Contractor and not of a subcontractor or consultant and unless otherwise stated in the Contract shall be assigned full time upon the Works and his/her responsibilities, authority and duties shall be in accordance with PC6.7 [*Health and Safety*]
- (4) Prior to the Commencement Date and in advance of the appointment of the HSO at Site, the Contractor's senior head office health and safety officer HSO may be assigned in this capacity until the HSO is appointed as above.
- (5) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (6) The HSO shall possess any qualification for such position if required by the Laws of the Country and also (if so required) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (7) The HSO shall be fluent in the language for communications defined in GC1.4 [*Law and Language*] and the also language of the Country.
- (8) Where there is no legal requirement under the Laws of the Country for qualification, the Contractor's HSO, shall have appropriate academic and health and safety qualification, work experience in construction (minimum 10 years) and in health and safety and management (minimum 10 years, can be concurrent with construction experience) and

whom the Contractor considers is qualified to perform the duties subject to receiving the consent of the Engineer.

- (9) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his/her duties.
- (10) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for HSO including additional managers, assistants and inspectors all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.
- (11) The HSO (where necessary with the assistance of his qualified support staff) shall personally be capable of ensuring that:
 - (a) all working areas of the Site are inspected on a regular basis (every working day and at least twice per shift) to detect if any unsafe practices or conditions exist.
 - (b) if such unsafe actions, practices or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this not possible then to suspend that part of the Works until such action has been taken.

Such inspections attended by the HSO, may also include the attendance of the safety representative of the Engineer.

1.8 Health and Safety Officer – Scope of Duties

1.8.1 The HSO shall devote his/her full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.8.2 The particular scope of duties of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Works.
 - (a) Preparation of Safety Plans, implementation, evaluation and improvement thereof.
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's personnel and Employer's Personnel.
 - (c) Provision of activity records in progress reports.
 - (d) Detection through constant inspection and implementation of corrective measures for any unsafe conditions at the Site and unsafe behaviour or practices of the Contractor's Personnel and Employer's Personnel.
 - (e) Consultation on safety management with the Employer and the Engineer.
 - (f) Issuing instructions for suspension of the Works or parts thereof in case of accident or the like.
 - (g) Responding to accidents, creating and implementing measures to prevent recurrence.
 - (h) Reporting and consulting with the Employer's Personnel including when an accident occurs or an accident situation is likely.
 - (i) Appointment of health and safety inspectors and assistants.
- (2) Instructing the Contractor's Personnel and Employer's Personnel to take improvement measures for maintaining health and safety and preventing accidents.
- (3) Checking the health status of the Contractor's Personnel.

- (4) Planning and implementation of various training and education implementation plans.
- (5) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including lost time records and near miss cases.
- (6) Preparing regular internal and external reports on health and safety activities.
- (7) Hazard prediction activity (Kiken Yochi: KY).

Does this have international meaning?

1.9 Contractor's Health and Safety Committee

(NK I Suggest that "Safety Committee" has better international meaning than "Safety Council"??)

- 1.9.1 The Contractor shall create an internal Safety Committee for the purpose of effective health and safety management.
- 1.9.2 Members of the Contractor's Safety Committee shall include:
 - (1) Contractor's Representative
 - (2) Contractor's Health and Safety Officer at Site
 - (3) Health and safety support staff
 - (4) Medical and first aid staff
 - (5) Contractor's Senior site staff
 - (6) Contractor's head office safety manager (as necessary)
 - (7) Subcontractors representatives, health and safety personnel, site staff
 - (8) Representative of Contractor's workers on Site.
 - (9) (If necessary) Representatives of the relevant government authorities and agencies
 - (10) Other necessary personnel
- 1.9.3 The Chairman of the Safety Committee shall be the Contractor's Health and Safety Officer at Site.
- 1.9.4 The Contractor shall hold a regular Safety Committee Meeting for the purpose of sharing information regarding health and safety management among the Contractor's Personnel.
 - (1) Frequency of the meeting: At least once a month
 - (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Monthly or weekly schedule of important health and safety matters
 - (c) Accidents, injuries and measures to prevent any recurrence.
 - (d) Hazards, safety and health problems resulting from:
 - (i) Site inspections by HSO.
 - (ii) Issues raised by the representative of Contractor's workers on Site
 - (iii) Issues raised by subcontractors
 - (iv) Issues raised by others
 - (e) Feedback on the regular safety, coordination and other meetings with the Engineer.
 - (f) Safety instructions received from the Engineer.
 - (g) Items to be coordinated with police, fire department and other related organisations

- (h) Compliance and registration matters under the Laws of the Country.
- (i) Safety and health awards, media attention and the like.
- (j) Other matters.

1.9.5 Report on the Safety Committee Meeting

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.10 Engineer's Regular Safety Meeting

1.10.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to make commitments on health and safety matters on behalf of the organisations that they represent.

- (1) Frequency of the meeting: Once a month
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Monthly or weekly schedule of important health and safety matters
 - (c) Accidents, injuries and measures to prevent any recurrence.
 - (d) Hazards, safety and health problems resulting from:
 - (i) Inspections by the Engineer and the Employer
 - (ii) Site inspections by HSO.
 - (iii) Issues raised by the representative of Contractor's workers on Site
 - (iv) Issues raised by subcontractors
 - (v) Issues raised by others
 - (e) Status of resolution of previous problems
 - (f) Items to be coordinated with police, fire department and other related organisations
 - (g) Compliance and registration matters under the Laws of the Country.
 - (h) Safety and health awards, media attention and the like.
 - (i) Other matters.

1.10.2 Report on the Engineer's Regular Safety Meeting

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven days after the meeting.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer with a further copy provided directly to JICA.

NK - I suggest that this direct report will be necessary and useful, as it will provide JICA with the direct information they will need for statistical monitoring information and also early and official warning on potential and major issues.

If it is included in JSSS as this suggests, then the Employer will be deemed to have agreed to its use and cannot object later to such direct reporting.

Suggest also that the following might be helpful, I have made this optional in Part C

1.11 Project Safety Committee

- 1.11.1 On larger projects with multiple contractors, if required by the Bidding Documents for that Project, the Employer or Engineer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire project team.
- 1.11.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:
- (1) The Employer
 - (2) The Engineer(s)
 - (3) The Contractor's Representative(s)
 - (4) Health and Safety Officers of all members
- 1.11.3 The Chairman of the Safety Committee shall be the Employer.
- 1.11.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.
- 1.11.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting

1.12 Health and Safety Coordination with Other Contractors

- 1.12.1 Refer to GC2.3 and GC4.6 regarding the respective obligations and requirements for the Contractor regarding cooperation with:
- (1) the Employer's Personnel,
 - (2) any other contractors employed by the Employer, and
 - (3) the personnel of any legally constituted public authorities,
- ... who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to (1) and (2) above, the Employer shall ensure that such personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC4.8 [*Safety Procedures*] and GC4.18 [*Protection of the Environment*].

In relation to (3) above the Contractor shall ensure that such personnel are fully informed of the Contractor's Safety Plan and shall liaise and agree with such authorities to ensure that their personnel comply with the Contractor's Safety Plan.

NK suggest the following 2 paragraphs be added from HSE:

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements and risk assessments) may be needed from other contractors who will be working at the Site. The Contractor is therefore required to contact such other contractors directly and liaise with them to obtain all such other information and incorporate this into the Safety Plan.

When risks arise because of potential interactions between the Contractor and other contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Contractor shall take a positive role in ensuring the general principles of risk prevention and control are applied amongst all contractors involved.

- 1.12.2 The Bidding Documents shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of the such works and the location, timing and other conditions for such work.
- 1.12.3 If the above circumstances apply, the Engineer shall arrange and host Health and Safety Coordination Meetings.
- (1) Frequency of the meeting: Once a month
 - (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities
 - (c) Accidents, injuries and measures to prevent any recurrence.
 - (d) Status of resolution of previous problems
 - (e) Items to be coordinated with police, fire department and other related organisations
 - (f) Compliance and registration matters under the Laws of the Country.
 - (g) Safety and health awards, media attention and the like.
 - (h) Other matters.
- 1.12.4 Report on the Health and Safety Coordination Meetings.
- (1) The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
 - (2) A copy of this report shall be submitted to the Engineer and Employer within seven days after the meeting.
 - (3) A further copy shall be included in the Contractor's monthly progress report.

1.13 Contractor's Health and Safety Management Activities

1.13.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.13.2 Health and safety management activities shall include (but are not limited to):

- (1) Overall Management Activities
 - (a) Tasks of the Health and Safety Officer as described above
 - (b) Arranging, chairing, attending meetings as described above.
 - (c) Arranging, chairing, attending pre-work meetings, pre-start meetings, schedule meetings
 - (d) Monitoring the implementation of the Safety Plan
- (2) Management of Contractor's Personnel
 - (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, toolbox meetings, providing general advice and instruction, specific instructions on individual works, safety confirmations, information to be conveyed etc.
 - (b) Instruction and management of 5S Activities (Seiri: sorting, Seiton: tidying, Seiso: cleaning, Seiketu: cleanliness, Shituke: discipline)

Does this have meaning internationally ?

- (c) Instruction and management of hazard prediction activity (Kiken Yochi: KY)

Ditto

- (d) Instruction and management of safety education and training
(e) Instruction and management of various safety measures

1.14 Monitoring

1.14.1 The Contractor shall develop and implement systems to ensure that compliance with the Safety Plan is monitored efficiently and transparently at all times, for which purpose the Contractor shall

- (1) Create checklists for monitoring
- (2) Carry out regular and irregular monitoring of implementation status
- (3) Monitor failed, unsafe or non-compliant conditions
- (4) Create files and safe storage systems for the monitoring records
- (5) Copy all relevant information to the Engineer as requested by the Engineer.

1.15 Joint Site Safety Inspections

1.15.1 In addition to the Contractor's own daily Site Safety Inspections described above, the Contractor shall also conduct regular Joint Site Safety Inspections with the Engineer or (if appointed) the safety representative of the Engineer. Respective safety staff may also attend

1.15.2 Frequency of Joint Site Safety Inspections shall be at least once a week

1.15.3 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.16 Engineer's Safety Representative

(NK what is the future intention? Will a safety engineer be appointed in future on all projects or will the Engineer act in this capacity?)

This requires a more detailed procedure, the following is an outline suggestion only This requires further coordination and development with other sections (e.g. scaffolding) so that joint safety and certification and "safe for use" procedures can be implemented if required) without affecting the Contractor's overriding responsibility.

Please refer to Part C where I have made further reference.

1.16.1 On large projects, the Engineer shall appoint an assistant under GC3.2 to be known as the Engineer's Safety Representative (ESR) and who shall be responsible for health and safety within the Engineer's organisation on Site and for monitoring the Contractor's compliance with the Contractor's Safety Plan. By written notice served under GC3.2, the Engineer shall delegate authority to the Engineer's Safety Representative to represent the Engineer in matters of health and safety at Site, to issue written instructions to the Contractor on matters of health and safety and monitor compliance with such instructions which shall include:

- (1) Instructions requiring the Contractor's compliance with the Safety Plan
- (2) Emergency instructions to Contractor to stop working where the Engineer observes accidents, near misses or unhealthy or unsafe conditions
- (3) Instructions requiring the Contractor to change the working methods at the Site to improve health and safety.

- 1.16.2 The Engineer's Safety Representative shall cooperate and work closely with the HSO and will represent the Engineer on Joint Site Safety Inspections and also undertake independent and regular inspections of the Works at the Site.
- 1.16.3 The Engineer's Safety Representative shall give safety compliance instructions to the Contractor in accordance with his/her delegated authority under GC3.3.
- 1.16.4 The Contractor shall take corrective action within the time limit prescribed in the instruction, shall keep the Engineer's Safety Representative fully informed on progress and shall report in writing when the corrective action is completed.
- 1.16.5 If the Bidding Documents state that the appointment of a full-time or part-time Engineer's Safety Representative is not required (refer to Chapter 1: General, Part C), it is to be assumed that the Engineer shall act in this capacity.

Communications may require more thought and definition. Who is to issue and receive? Can be direct HSO and ESR

1.17 Safety Statistics

- 1.17.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.
- 1.17.2 Actual statistics shall include the following:
- (1) Accident: description, casualties, location, time, type and cause
 - (2) Near-miss: description, casualties, location, time, type and cause
 - (3) Lost-time: lost hours of casualties, duration of discontinuation
 - (4) Remedial measures taken
 - (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate
 - (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes of them
 - (7) Record of report to the labour standards office
 - (8) Number of health and safety staff, contents, frequency, participant, duration of safety education at site and safety event
 - (9) Others
- 1.17.3 All data shall be in a format and content to meet with the approval of the Engineer.
- 1.17.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the safety representative of the Engineer for validation and mutual agreement.
- 1.17.5 The data shall subsequently be compiled and Monthly progress report.

1.18 Safety Reports

- 1.18.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:
- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, improvement
 - (2) Joint Site Safety Inspections
 - (3) Weekly Safety Report: summary of safety matters of the week,
 - (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report can be submitted as an

attachment to the Contractor's monthly progress report.

1.19 Health and Safety Records

1.19.1. The Contractor shall keep the following records related to health and safety:

- (1) Records of accidents and near misses, occupational accidents
- (2) Records of all meetings for safety and health management
- (3) Record of monitoring of safety and health management activities
- (4) Record of health and safety education and training for the Contractor's personnel
- (5) Records of health management for the Contractor's personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.

1.20 Proper Placement of Contractor's Personnel

1.20.1 Further to compliance with GC6.9, the Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.

The HSO shall countersign all such records to indicate his/her confirmation of the suitability of each member of the Contractor's Personnel prior to their placement.

These records shall be available for the Engineer's inspection at any time.

1.20.2 Suitability of Contractor's Personnel and their work assignment shall be assessed in consideration of:

- (1) Work content and work environment
- (2) Work experience and ability etc.
- (3) Health condition, and health condition before daily work starts
- (4) Allocation of an achievable and safe work volume.
- (5) Allocation to workers under 18 in accordance with GC6.21

1.21 Placement and ID of Personnel for Works Requiring a License

1.21.1 If for any of the operations at Site, the Laws of the Country require operating, supervising or any other personnel to have a licence, particular qualification, registration or certification the Contractor shall ascertain that all such personnel possess and maintain such documentation.

1.21.2 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for his personnel and shall independently test all personnel to ascertain that they do possess sufficient knowledge, qualification and skills.

1.21.3 The Contractor shall implement an identification (ID) pass system whereby all personnel on Site carry an ID pass with name, photograph, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any worker is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that he resolves the situation without delay by removing the offending person from the Site immediately and appointing a suitable replacement.

1.22 Health and Safety Education and Training

- 1.22.1 The Contractor shall conduct health and safety education and training for all of the Contractor's Personnel.
- 1.22.2 The Contractor shall include in the Safety Plan the outline of the education and training plans (participants, time, teaching materials, policy of selecting educators and trainers). In addition, the Contractor shall submit full details of such education and training to the Engineer for his information before the start of such education and training.
- 1.22.3 Education and training shall be provided free-of-charge to the trainees, conducted during normal working hours, trainees shall be paid and the Contractor shall bear all necessary expenses.
- 1.22.4 For general education and training of new entrants upon the Site and those who are scheduled to change work type, skill or location, the following subjects shall be included:
- (1) Chain of command and communication methods for the work
 - (2) Hazard or danger of machinery, equipment, raw materials, etc., and methods of dealing with such hazards or danger
 - (3) Performance and handling methods of safety devices, personal protective equipment (practical on-Site training)
 - (4) Hazardous substance control devices (practical on-Site training)
 - (5) Work procedures generally
 - (6) Inspection before start of the work
 - (7) Maintaining a orderly, tidy and clean Site
 - (8) Emergency measures and evacuation at the time of accident etc.
 - (9) Health and safety rules
 - (10) Causes and prevention of diseases that may occur in relation to the work concerned
 - (11) Other matters necessary for health or safety related to the works concerned
- 1.22.5 For education and training of Contractor's Personnel who are planned to be assigned to dangerous or harmful work (for example as listed in Annex 2), such personnel shall be given the same general education and training as above plus further special education and training pursuant to the work in which such personnel are to be engaged.

The Contractor shall determine the educational subjects and teaching hours for the special education and training with reference to Annex 3.

Special education for the work concerned may be omitted in full or in part for any personnel who the Contractor has ascertained, holds valid qualification issued by an acknowledged public organisation of the Country and who has finished comprehensive training by the public organisation of the Country or acceptable training in another country and whom the Contractor ascertains as having equivalent and sufficient knowledge and skills for all or part of items of the special education

- 1.22.6 For education and training of Contractor's Personnel who are to be appointed as operation leaders as co-workers with each team of workers engaged upon such work at the Site (for example as listed in Annex 4 and 5), such personnel shall be given the same general education and training as above plus further special education and training pursuant to the work in which such personnel are to be engaged.

The Contractor shall determine the educational subjects and teaching hours for the skill-training course with reference to Annex 5.

Special education for the work concerned may be omitted in full or in part for any personnel

who the Contractor has ascertained, holds valid qualification issued by an acknowledged public organisation of the Country and who has finished comprehensive training by the public organisation of the Country or acceptable training in another country and whom the Contractor ascertains as having equivalent and sufficient knowledge and skills for all or part of items of the special education

1.22.7 Education and training personnel

Education and training lecturers can be Contractor's Personnel who are experienced, academically qualified and (if legally required) registered as a teacher or lecturer under the Laws of the Country, fluent in the language of the Country or external lecturers similarly qualified and registered.

In case of absence of availability of such suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary qualification, ability and experience, subject to the receiving the advance consent of the Engineer.

1.22.8 Records of education and training

The Contractor shall create and store records of trainees, showing full details of training subjects and their capability, achievements etc., and permit the Engineer to inspect these as and when required by the Engineer.

1.22.9 Explanation of health and safety rules to persons other than the Contractor's Personnel

The Contractor shall provide general health and safety education courses to the Employer's Personnel and to any other persons who are permitted to enter the site.

1.23 Emergency Response and Relief

1.23.1 The Contractor shall prepare an emergency response plan as a part of the Health and Safety Plan in order to promptly and appropriately respond to natural disasters, fires, and other emergencies that may occur during construction.

NK please note:

Natural disasters include typhoons, earthquakes etc. which are actually GC19 Force Majeure situations for which, the contractor is not responsible and he has no obligation to give any such automatic "response".

What is the actual required extent of the Contractor's "response"? What manpower and equipment is he to provide? How can this be predicted and estimated?

What about the Employer's and Engineer's own plans and what about the availability of the rescue services etc. in the Country?

These arrangements appear to be onerous upon the Contractor.

Can we please discuss and consider this further to understand the purpose and intention.

We have edited the following to make it readable but do not agree with the content.

In addition, the Contractor shall fully inform the Employer's Personnel, Contractor's Personnel and all other persons entitled to be upon the Site, of the detail of the Emergency Response Plan. The Contractor shall also establish an emergency call system and carry out training based on the Emergency Response Plan.

The Emergency Response Plan, shall: include the following items:

- (1) Expected types of emergency situation
- (2) Describe the emergency call system
- (3) Explain the specific measures for emergency response

- (4) Include measures for quickly establishing affected persons and locations, define assembly points and the like
- (5) Permit fast changes and revisions to be made in response to changes in the Site situation
- (6) Be submitted to the Engineer as part of the Safety Plan, and be updated as necessary throughout the Time for Completion of the Works.

1.23.2 The Contractor shall establish an Emergency Call communication system that will require confirmation from all contact persons even in the event of an emergency. This shall include the creation of an emergency contact list, which shall be posted in a visible location such as the Contractor's Site office as informed to all personnel.

The emergency contact list shall include name of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel
- (2) Relevant government authorities and agencies: administrative agencies, police stations and fire stations etc.
- (3) Contractor's Personnel at the Site, particular individuals positions, head office etc., subcontractors, material suppliers and the like.
- (4) Other contractors engaged upon the Site or the Works

1.23.3 The Contractor shall conduct emergency response training based on the Emergency Response Plan which shall include:

- (1) Implementing a training programme at least every six months
- (2) Improving the emergency response plan based on training results
- (3) Providing details of the emergency response

The Contractor shall provide training for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be upon the Site.

Details of the training shall be included in the Emergency Response Plan and Safety Plan.

1.23.4 If and when an emergency occurs during the Time for Completion, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc. all as circumstances reasonably permit and as instructed by the Engineer.

1.23.5 The Contractor shall take measures such as the placement and installation of the following accident relief facilities and equipment, medical personnel, ambulances, etc.

NK See above queries, the Contractor usually has no such obligations for force majeure events, so if this is required it must be fully specified and paid for. Usually only the use of existing site facilities is allowable technically in accordance with the Engineer's Instructions (and payment by Employer).

We assume that the following "Emergency Relief Plan" actually means a plan for dealing with common accidents on the Site. This heading is a little misleading, I suggest change to something like "Accident Relief Plan" so there can be no confusion with "Emergency Response Plan"

What about health issues? The document is largely silent on this yet statistically this is the biggest problem

1.23.6 The Contractor shall prepare an Accident Relief Plan in consideration of the nature and timing of the Works and the location(s) of the Site and taking account at least of the minimum facilities and measures to be provided in accordance with the Specification for the Contract (refer also to Chapter 1: General, Part C) and including:

- (1) Availability of medical personnel who can provide first aid and additional medical assistance
- (2) Availability of vehicles and drivers that can properly transport casualties to clinics on Site or hospitals off the Site.
- (3) Establishment of first aid room, clinic or like facilities on Site with equipment and consumables
- (4) Arrangement of communication facilities and measures for emergency response
- (5) Deployment of first aid appliances, aids, instruments and medicines and kits in accordance with the scale and characteristics of the Work.
- (6) First aid training, appointment of first aiders and dissemination of information.

It is to be noted that Chapter 1: General, Part C, lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.

1.24 Measures at the Time of Accident Occurrence

1.24.1. When an accident occurs, the Contractor shall immediately discontinue the work task and implement the following measures as necessary.

- (1) Safely locate, extract casualty and provide first aid and other accident relief activities
- (2) Secondary disaster prevention activities

NK what does this mean? Why "disaster"

- (3) Preserve the accident site, make safe and prevent anyone interfering or entering
- (4) Discontinue construction work related to or in the vicinity of the accident

NK This is a repeat of the above?

- (5) Implement measures instructed by the Engineer

What about automatic response by Contractor?

1.24.2. Report of Accident Occurrence, Cause Investigation Result and Recurrence Prevention Measures

The Contractor shall report the occurrence of an accident as follows in accordance with the Accident Relief Plan.

NK - The Emergency Response Plan is for natural disasters, it does not seem to apply here for normal accidents? The following is not yet edited

- (1) First report of the accident: Report to the Engineer by phone or other means as soon as possible.
- (2) First report of the accident situation: Report the accident-related information to the Engineer on the form designated by the Engineer as soon as possible.

NK - Can we please attach an accident report form now? As an appendix, please let me have a draft and I will include

- (3) Having investigated and established the cause, report on cause investigation of accident, situation on the site etc.: Report to the Engineer timely at any time.

NK - No time limit?

- (4) Report on measures to prevent recurrence: Report on cause investigation and preventive measures to the Engineer within one week after the accident or within a period agreed with by the Engineer.

1.24.3. Resumption Procedure of Construction Work

The procedures for resuming construction work at the Site after the occurrence of an accident are as follows.

- (1) Contractor examines and formulates measures to prevent reoccurrence and submits it to the Engineer.
- (2) The Engineer reviews the preventive measures.
- (3) The Contractor applies for resumption of work to the Engineer after making concrete preparations for implementation of the preventive measures.
- (4) The Contractor resumes the construction work with the consent of the Engineer.
- (5) The Contractor verifies the effectiveness of his preventive measures and informs the Engineer.
- (6) As necessary, the Contractor implements risk assessment and changes work plan.

1.25 Temporary Works

The following are draft notes, this is probably to be transferred and dealt with later in Chapter 7.1 but some reference may be necessary here.

Please leave this here for now and we will coordinate this (and other parts) later. There is cross reference to his clause in Part C.

- 1.25.1 The Contractor shall provide details at Bid stage (not calculations necessarily at this stage?) of all Temporary Works (TW) designs including Falsework for significant structures as listed in the Bidding Documents (refer to Chapter 1: General, Part C) and including for example:

- (1) Falsework equal to or higher than 3.5 m
- (2) Overhead passage equal to or higher than 10m (bridge?)
- (3) Scaffolds ("scaffolding"?) equal to or higher than 10m can engineer check scaffolding design?)
- (4) Other TW specified in the Contract or instructed by the Engineer

NK can we please discuss the above to clarify these and further requirements after which we will re-word this

What about other items such as TW for major bridge structures, tunnels, coffer dams, temporary dams, etc. ??

- 1.25.2 Unless otherwise stated in the Bidding Documents, Bidders/Contractors are required to comply with BS5975 or other equal and internationally accepted standard as approved by the Engineer in respect of the design and management of TW.

- 1.25.3 Contractors are required to engage an independent TW Designer(s) (TWD) to meet with the consent of the Engineer and who shall remain under the Contractor's responsibility and management. This person/entity shall be listed and described by the Bidder in the Bidding Documents.

- 1.25.4 The Engineer shall consciously endeavour to remove or reduce risks in the Permanent Works through his own design (for example by changing high level in-situ concrete structures to precast structures, simplifying applied ceiling and high level wall finishes and the like).

- 1.25.5 The Engineer shall cooperate and work with the Contractor's TW designer(s) and where possible shall provide important information on the permanent works design etc.
- 1.25.6 The Contractor shall submit TW method statements, (including designs and calculations) when requested by the Engineer under the Contract.
- 1.25.7 The review does not normally include the check of the design calculations of the Temporary Works. The Engineer has no obligation under the Contract to review TW design however he should do so for TW considered by him to be of vital importance for safety. The Engineer's response (if any) shall be in accordance with the Contract.

In accordance with GC3.1(c), any response from the Engineer shall be construed as provided in good faith and without prejudice to the Contractor's overriding responsibility for the TW.

- 1.25.8 The Contractor shall demonstrate by description in the Safety Plan that he has effective arrangements in place for controlling risks arising from the use of TW, by ensuring the following:

- (1) Appointment of a Temporary Works Co-ordinator (TWC) CONSIDER
- (2) Preparation of an adequate TW design brief.
- (3) Completion and maintenance of a TW register
- (4) Production of a TW design by an independent and specialist TWD (including a design risk assessment and a TWD method statement where appropriate).
- (5) Independent checking of the Temporary Works Design.
- (6) Issue of a TW design/design check certificate, if appropriate.
- (7) Pre-erection inspection of the TW materials and components.
- (8) Control and supervision of the TW erection, safe use, maintenance and dismantling of the temporary works, including procedures to:
- (9) Check that the TW have been erected in accordance with the design and issue a formal "permit to load" where necessary.
- (10) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the TW and issue a formal "permit to dismantle" where necessary.

The procedure shall include measures to ensure that the design function, the role of TW designer and the supervision at Site for TW erection, maintenance and removal are all carried out by competent and experienced individuals.

1.26 Temporary Works Designer (TWD)

MD needs to consider and coordinate further

- 1.26.1 If the TWD has been named in the Bid or Contract, the Contractor shall assign that named TWD at the appropriate time.
- 1.26.2 If the TWD has not been named in the Bid or Contract, the Contractor shall, prior to the Commencement Date, submit to the Engineer for consent, the name and particulars of the person or entity that the Contractor proposes to appoint as TWD. If consent is withheld or subsequently revoked in terms of GC6.9 [Contractor's Personnel], or if the appointed person fails to act as TWD, the Contractor shall similarly submit the name and particulars of another suitable person or entity for such appointment.

- 1.26.3 The Contractor shall not revoke the appointment of the TWD or appoint a replacement without the prior consent of the Engineer.
- 1.26.4 The TWD shall possess any qualification for such position if required by the Laws of the Country and also (if so required) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- 1.26.5 Where there is no legal requirement under the Laws of the Country for qualification, the Contractor's TWD shall have appropriate academic and Temporary Works design qualification, work experience in construction (minimum 10 years) and in Temporary Works Design and whom the Contractor considers is qualified to perform the duties subject to receiving the consent of the Engineer.

ANNEXES TO PART B: TECHNICAL REQUIREMENTS

ANNEX 1: ITEMS TO BE DESCRIBED IN THE SAFETY PLAN

NK please note that text generally has been changed from Original so that this is coordinated with other changes basically to make it work better. Further MD coordination is required

(1) Description of the Works

A description of the Works in outline and with overall layout plan to give an understanding of the overall layout and content of the Works showing main construction items and areas, roads, road access locations, working areas, storage areas, temporary offices, laydown areas, warehouses and the like facilities and including a summary of principal work items and significant quantities, etc.

(2) Contractor's Corporate Policy on Health and Safety Management

A description of the Contractor's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Contractor's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Site Personnel

A description of the health and safety management organisation at Site headed by the Contractor's Health and Safety Officer at Site and showing the responsibility and authority of all persons involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country to be complied with for the health and safety management of the Works, **unless superseded by JSSS. If superseded by JSSS** then the relevant clause number of JSSS shall be inserted.

(5) Contractor's Safety Certification and Implementation Policy

*NK see query in Chapter 1 (item 1.5) and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under item **CI**.*

The following clauses have also been added to JSSS Chapter 1.

Unless otherwise expressly stated in the Bidding Documents, the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

An authorised true copy of the current certification shall be provided in this part of the Bid and shall subsequently be included with the Contract.

(6) Temporary Works

NK this requires to be added as it is an essential part of the Safety Plan

Description of the arrangements for controlling risks arising from the use of Temporary Works by ensuring that the requirements of JSSS Chapter 1: Temporary Works, **Clause 1.25.8** are fulfilled.

~~(7) Safety Measures for Contractor's Equipment and Temporary Works~~

Requires changing due to the above added clause

A description of the procedures for inspecting and maintaining Contractor's **Equipment and**

~~Temporary Works~~ together with all spare parts including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

- (8) Health and Safety Information Sharing and Communications Policy
A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.
A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving workers feedback and opinions regarding health and safety.
- (9) Plans for Health and Safety Education and Training
An outline description of the proposed education and training methods and facilities including participants, time, teaching materials, policies for selecting educators and trainers, etc. and covering new-entrant education.
- (10) Deployment of Health and Safety Related Facilities and Personal Protective Equipment (PPE)
A description of the intended policies for the deployment of facilities and equipment to reduce health and safety risks, detailing the items and methods for providing and replacing general Personal Protective Equipment (PPE) and the use of additional PPE for particular working conditions and environments.
- (11) Health and Safety Rules
A description of the general health and safety rules (e.g. limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site. If a specific work area, condition or environment requires detailed rules, this shall be stated and detail will be developed in later issues of the Safety Plan.
- (12) Site Safety Inspection Plan
A description of the methods for on-Site inspections showing locations and frequency. The description shall also include the methods for reporting, recording and utilising results.
- (13) Site Security
A description of the proposed Site security methods explaining how, access to the Site by third parties, neighbours, nearby residents and any other trespassers upon the Site will be prevented. The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.
- (14) Policy for Preventing Traffic Accidents
A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.
- (15) Prevention of Construction Accidents at Site
A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures).
- (16) Emergency Response Plan
A description of the Emergency Response Plan including the action plan for rescue of casualties in an emergency such as a major accident or disaster occurrence, work discontinuation,

notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.

(17) **Accident Relief Plan**

A description of the Accident Relief Plan including the procedure for first aid at the location and time of any accident and a description of appropriate medical facilities to be provided at the Site, including for example nurse, doctor, ambulance etc. all as stated in the Bidding Documents. The procedure shall also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(18) **Facilities for Maintaining the Occupational Health Environment**

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

(19) **Work Discontinuation Criteria**

A description of the proposed criteria for discontinuation of work and person responsible for issuing instructions for such discontinuation for example when danger is predicted for work due to strong wind, heavy rain, snow or other factors

(20) **Monitoring and Review of Health and Safety Management Activities**

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings and **5S activities**

(21) **Legal Remedies and Requirements after Occupational Accidents**

A description in brief of the legal requirements and remedies in the case of injuries and death at work and for personnel affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

ANNEX 2: DANGEROUS OR HARMFUL OPERATIONS

NK: I have concerns about whether the information in the following annexes is of any value in an international context, I think not. In a domestic Japanese sense these requirements are of course very important as they are integrated with many other Japanese laws and regulations. However when abbreviated extracts only are included it does not have great meaning, there appears to be much missing which may not be covered by the fall-back (OSHA).

Also skill training is included for operation leaders but no such skill training or checking is included for other skilled persons is this correct?

Please consider all very carefully.

I am inclined to suggest that a simple basic requirement such as GC6.9 is sufficient, perhaps adding some reference to training and making the contractor responsible for all is probably better than going into so much detail for only a part.

The following is a list of example work types classified as “Dangerous or Harmful Operations”

When Contractor’s Personnel are engaged in the following or other potentially dangerous or harmful operations such personnel shall be given special health and safety training appropriate to the operations concerned.

Examples of such operations include (but are not restricted to) the following:

(as provided for by the Ordinance of the Ministry of Health, Labour and Welfare).

NK I requested a complete list at our last meeting however, according to the above Ordinance there are many more operations and requirements in addition to this list and also as this effectively applies only in Japan; is there a real need for this?

- (1) Crane operation and mobile crane operation
- (2) Welding and cutting of metal using arc welder *what about gas welders and cutting machines?*
- (3) Forklift operation
- (4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: *3t or more*) *why 3t or more? Why not all?*
- (5) Vehicle-type construction equipment operation (for foundation work: *3t or more*) *why 3t or more? Why not all? what about track type?*
- (6) Roller operation *what type?*
- (7) Operations that use organic solvents *what about other harmful substances and explosives for example?*
- (8) Sling work *meaning hoisting and rigging work*
- (9) Rope height work *cradles and hoists?*
- (10) Work to be performed using a full harness type of fall prevention device where the height is 2 meters or more and it is difficult to provide for the work floor *meaning of difficult? Too expensive? Is this coordinated with other chapters*

What about small tools (drills and angle grinders) all electrical works, gas pipe works etc etc? and related academic educational achievements?

ANNEX 3: SUBJECTS OF SPECIAL EDUCATION FOR DANGEROUS OR HARMFUL OPERATIONS

When Contractor's Personnel are engaged in the following or other potentially dangerous or harmful operations such personnel shall be given special health and safety training appropriate to the operations concerned.

Examples of special training for the above listed sample operations include (but are not restricted to) the following:

- (1) Special education for crane operation and mobile crane operation:

Subject	Scope
1 Knowledge of mobile and other cranes	Type and model, main structural parts, operating device, safety device, brake function, handling method, method of inspection and maintenance
2 Knowledge about motor and electricity	Internal combustion engine, steam engine, hydraulic drive, danger from electric shock
3 Knowledge of mechanics necessary for operation of mobile crane and other cranes	Force (composition, decomposition, balance and moment), centre of gravity, load, wire rope, hook and hook strength, relationship between wire rope application and load
4 Practical skill	Method of mobile crane and other crane operation Signs for mobile crane and other crane operation

- (2) Welding and cutting of metal performed using arc welder

Subject	Scope
1 Knowledge of arc welding etc.	Basic theory of arc welding, basic knowledge about electricity
2 Basic knowledge on arc welding equipment	DC arc welder, AC arc welder, automatic electric shock prevention device for AC arc welder, welding rod and rod holder, wiring
3 Knowledge of arc welding work methods	Inspection and maintenance before work, methods of welding and cutting, inspection of welds, post-work measures, accident prevention
4 Practical skill	Handling of equipment for arc welding work

- (3) Forklift operation

Subject	Scope
1 Knowledge of equipment structure and handling methods for the travel of a forklift.	Structure and method of handling for forklift engine, power transmission device, traveling device, steering device, braking device, auxiliary device for traveling

2 Knowledge of equipment structure and handling methods for cargo handling	Structure and handling method of hydraulic equipment (including safety valve), head guard, backrest, auxiliary devices for cargo handling, method of inspection and maintenance
3 Knowledge of mechanics necessary for forklift operation	Force (composition, decomposition, balance and moment) weight, centre of gravity and stability of objects, speed and acceleration, load, stress, material strength
4 Practical skill	Operation of traveling, operation of cargo handling

- (4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: 3 t or more)

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods motors for vehicle-type construction equipment (for ground levelling, transportation, loading and digging), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance
4 Practical skill	Operation of traveling, operation of equipment for work

- (5) Vehicle-type construction equipment operation (for foundation work: 3 t or more)

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods of motors for vehicle-type construction equipment (for foundation work), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for foundation work), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for foundation work), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance

4 Practical skill	Operation of traveling, operation of equipment for work
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(6) Roller operation

Subject	Scope
1 Knowledge of roller	Types and applications of rollers, structure and handling method of Power transmission devices of rollers, working devices, steering devices, brakes, electrical devices, alarm devices and auxiliary devices, method of inspection and maintenance
2 Knowledge of general matters required for roller operation	Mechanics necessary for operation, construction method by roller
3 Practical skill	Roller operation method

(7) Operations that use organic solvents

Subject	Scope
1 Work environment management	Method of maintenance and inspection of equipment for venting prevention measures of organic solvent vapour and equipment for ventilation, Grasp and maintain the working environment
2 Work management	Work management method, occupational health protective equipment
3 Health management	Types and hazards of organic solvents, operations using organic solvents, health hazards caused by organic solvents, prevention methods and first-aid measures, medical check-up and follow-up measures
4 Accident case	Accident cases and prevention measures

(8) Sling work

Subject	Scope
1 Knowledge of cranes, mobile cranes, other cranes and derricks (hereinafter referred to as "cranes etc.")	Type and model, structure and function, safety device and brake
2 Knowledge of mechanics necessary for slinging work	Force (composition, decomposition, balance and moment), centre of gravity of simple figures and stability of objects, friction, weight, load
3 Method of slinging	Selection and use of the sling tool, basic work action (including safe operation method), method of signalling

4 Practical skill	Signs for operation, work with a sling for a crane
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(9) Rope height work

Subject	Scope
1 Knowledge of rope height work	Method of rope height work
2 Knowledge about main ropes etc.	Types of main ropes, structure, strength and handling methods, methods of inspection and maintenance of main ropes, etc.
3 Knowledge about prevention of occupational accidents	Measures for the prevention of occupational accidents caused by the fall, methods of using, maintaining and inspecting safety belts and protective helmet
4 Practical skill	Method of rope height work, inspection of main rope etc.

(10) Work to be performed using a full harness type of fall prevention equipment where the height is 2 meters or more and it is difficult to provide for the work floor

Subject	Scope
1 Work knowledge	Types of equipment used for work, structure and handling methods, methods for inspecting and maintaining equipment used for work, methods of work
2 Knowledge of fall prevention equipment (limited to full harness type, the same shall apply hereinafter)	Types and structures of full harnesses and lanyards for fall prevention equipment, methods for mounting the full harnesses, installation and selection methods for lanyards, methods of inspection and maintenance of fall prevention equipment, how to use the related equipment for fall prevention equipment
3 Knowledge about the prevention of occupational accidents	Measures to prevent occupational accidents due to fall, measures to prevent hazards due to falling objects, measures to prevent electric shock, methods of using protective helmet and methods of maintenance and inspection, and other accident due to work and its preventive measures
4 Practical skill	Method of using fall prevention equipment

ANNEX 4: WORK REQUIRING THE APPOINTMENT OF AN OPERATION LEADER

The following is a list of example work types that require the appointment and assignment of an operation leader as a co-worker to each team of workers engaged upon such work at the Site.

Such operation leaders shall be given special health and safety training appropriate to the operations concerned.

Examples of operations shall include (but are not restricted to) the following:

- (1) Earth excavation and shoring work
- (2) Tunnel excavation work
- (3) Tunnel lining work
- (4) Excavation work for quarrying
- (5) Formwork, falsework, supports and shoring assembly/dismantling work
- (6) Scaffolding assembly/dismantling work
- (7) Steel frame fabrication and erection work on buildings and structures
- (8) Steel bridge fabrication and erection work
- (9) Wooden, masonry and other building work
- (10) Demolition work of concrete or masonry structures
- (11) Reinforced concrete construction work
- (12) Organic solvent work and other hazardous substances or materials

ANNEX 5: SUBJECTS OF SKILL TRAINING COURSE

Examples of special training for the operations leaders shall include (but are not restricted to) the following:

What about skilled persons other than operation leaders?

(1) Operation leader for Earth excavation and shoring work

Subject	Scope
1 Knowledge of work method	Method of ground excavation, treatment of loose rocks and buried objects, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock, and the type, material, structure, assembly drawing, maintenance and inspection of earth shoring, matters related to installation and removal of strut and wailing
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases, measures for preventing hazards, collapse prediction, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(2) Operation leader for tunnel excavation work

Subject	Scope
1 Knowledge of work method	Method of tunnel excavation, mucking, and types, structure and method of assembling of tunnel support, method of installing rock bolts
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases and toxic gases, measures for preventing hazards
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(3) Operation leader for tunnel lining work

Subject	Scope
1 Knowledge of work method	Types, materials, structure and assembling drawings, inspection and repair of tunnel support, method of assembling and dismantling tunnel support
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, instruments and tools, measures for preventing hazards, clothing and protective equipment

3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence
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(4) Operation leader for excavation work for quarrying

Subject	Scope
1 Knowledge of rock types, drilling methods for rock excavation, etc.	Types of rock, method of excavation for extraction of rock, treatment of loose rock, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases, measures for preventing hazards, collapse prediction, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(5) Operation leader for formwork, falsework, supports and shoring assembly/dismantling work

Subject	Scope
1 Knowledge of work method	Types and materials of form and form shoring, structure of form shoring, assembly drawings, inspection, etc. Methods of assembly and dismantling of form and frame shoring
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(6) Operation leader for scaffolding assembly/dismantling work

Subject	Scope
1 Knowledge of work method	Types of scaffolds, materials, structures and assembly drawings, methods of scaffold assembly, disassembly and change of work, inspections and repairs. Matters of structures and methods assembly, disassembly and changes of climbing bridges, protective shelf, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment

3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence
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(7) Operation leader for steel frame fabrication and erection work on buildings and structures

Subject	Scope
1 Knowledge of work method	Types of buildings and towers, materials, structures, design drawings, shop drawings, equipment and tools, methods of work for assembling steel frames of buildings, etc., inspection
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(8) Operation leader for steel bridge fabrication and erection work

Subject	Scope
1 Knowledge of work method	Types of bridges, materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(9) Operation leader for wooden, masonry and other building work

Subject	Scope
1 Knowledge about constructing structural members of buildings, installing floors, roofs, etc.	Construction methods of main structural parts such as frame, floor structures, walls, construction methods of roof and outer wall foundation, joints, order of construction, reinforcement method for frame

2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(10) Operation leader for demolition work of concrete or masonry structures

Subject	Scope
1 Knowledge about structural members including concrete masonry and reinforcement etc.	Types, structures, construction method of concrete and masonry work, types of method of construction, method of work, work plan, coordination with m & e services etc
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(11) Operation leader for reinforced concrete construction work

Subject	Scope
1 Knowledge of work method	Types of materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(13) Operation leader for organic solvent work and other hazardous substances or materials

Subject	Scope
1 Knowledge of health hazards and their preventive measures.	Pathology, symptoms, prevention methods and first-aid measures of health problems caused by such materials

2 Knowledge for improving the work environment	Properties of organic solvents, and other hazardous substances or materials management of equipment and other facilities related to production and handling of such materials, methods of evaluation and improvement of working environment
3 Knowledge of protective equipment	Type, performance, method of use and management of protective equipment pertaining to the production or handling of such materials
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

JICA STANDARD SAFETY SPECIFICATION (JSSS)

CHAPTER 1: GENERAL

PART C: REQUIRED AMENDMENTS TO THE “JICA STANDARD BIDDING DOCUMENTS”

[This Part C applies to executing agencies, employers and their consultants for use in the preparation of PQ and Bidding Documents, evaluation of Bids and award of Contracts]

JICA require that the amendments described below, shall be made to the “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA), October 2012, version 1.1.

The Bidding Documents for particular projects where JSSS has become effective as described in the above “Part A: Preamble Notes”, shall be amended in accordance with the following instructions:

C1. Specifying Safety Requirements in Bidding Documents for Relevant Projects:

Part 1 – Bidding Procedures, Section I: Instructions to Bidders, Section VI. Works Requirements, Specification, pages WR-3 to WR-5

Add the following additional text on page WR-5 to follow on from the existing text.

JSSS contains comprehensive reference to the health and safety requirements for Projects and includes detailed requirements for the preparation, submission, review and response processes for Method Statements and Safety Plans for the execution of the Works.

Care shall be therefore be taken when drafting Bidding Documents for Projects that are to use JSSS to ensure that there is no duplication of the JSSS requirements in the Technical Specification for such Projects. Unnecessary and duplicated reference must be avoided.

It should be recognised that JSSS contains standard safety requirements that shall apply and prevail generally to relevant Projects and consequently it will be necessary to specify particular requirements applicable to individual Projects. Such particular requirements shall be carefully drafted and included in the Technical Specification of relevant Projects.

Technical Specifications shall therefore contain clear and precise descriptions covering such particular requirements including for example appropriate clauses for the following:

JSSS Chapter 1 Reference	Item
1.5 Contractor’s Safety Certification	State if the Bidder/ Contractor is required to be formally accredited under OHSAS 18001 and if so require submission of a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or equivalent from an internationally recognised and approved organisation
1.11 Project Safety Committee	State if a Project Safety Committee is to be established for the Project and add any further requirements.
1.12.2 Employer’s other contractors (see also GC2.3)	Describe and if possible identify or describe the scope of any other contractors to be employed by the Employer on the Site and specify working areas and timing as far as possible.
1.16 Engineer’s Safety Representative	State if the Engineer will appoint a full-time or part-time Safety Representative as an assistant upon the Works or if the Engineer will act in this capacity.

<p>1.23.6 Accident Relief Plan</p>	<p>Describe the minimum measures and facilities to be provided in consideration of the nature and timing of the Works and the location(s) of the Site, including:</p> <ol style="list-style-type: none"> (1) Medical personnel to provide first aid and additional medical assistance (2) Vehicles and drivers that can properly transport casualties to clinics on Site or hospitals off the Site. (3) First aid room, clinic or like facilities on Site and specify equipment and consumables (4) Communication facilities and measures for emergency response (5) First aid appliances, aids, instruments and medicines. (6) First aid training, appointment of first aiders and dissemination of information. (7) Include others as appropriate
<p>1.25 Temporary Works (If requirements are applicable on the Project)</p>	<p>Temporary Works (TW) designs are required for the following significant structures:</p> <ol style="list-style-type: none"> (1) Falsework equal to or higher than 3.5 m (2) Overhead passage equal to or higher than 10m <i>(bridge?)</i> (3) Scaffolds <i>(“scaffolding”?)</i> equal to or higher than 10m <i>can Engineer check scaffolding design?</i> (4) Other TW specified in the Contract or instructed by the Engineer <p><i>NK please refer to queries on this subject in 1.25</i></p> <p>Bidders/Contractors are required to comply with BS5975, yes or no?</p> <p>Is a Temporary Works Designer required? What other Temporary Works staff are required to be assigned?</p> <p>Is independent checking of the Temporary Works Design required? Is the Issue of a TW design/design check certificate required?</p>
<p>Others to add - MD</p>	

JICA stress the importance of the Employer putting in place a sound working environment for the Contractor, including for example reasonable Time(s) for Completion, reasonable, continuous and unobstructed access to the Site and sufficient Site area(s), working and storage areas, all wherever possible. These provisions shall be clearly described in the Bidding Documents.

C2. Specifying the required detail of Safety Plans in Bidding Documents:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms
Technical Proposal, Safety Plan, page BF-33.

Delete “[Insert Safety Plan]” and in this place insert the following:

Prepare the Health and Safety Plan including details of all items listed below:

It is understood that the Bid Stage Safety Plan will be developed by the Contractor in more detail in the Safety Plan issued at Commencement Stage and at later stages but it is important that at Bid stage sufficient information is provided so that the following can be understood and evaluated.

Irrespective of what the Bidder may include in his plans and of any subsequent acceptance, approval or consent to the same, the detailed requirements of JSSS will continue to apply and prevail unless otherwise specifically agreed later in writing by the Engineer.

NK For Bidding purposes, the following is a copy of Annex 1, please coordinate as necessary if changes are made to Annex 1 and make the same changes here

(1) Description of the Works

A description of the Works in outline and with overall layout plan to give an understanding of the overall layout and content of the Works showing main construction items and areas, roads, road access locations, working areas, storage areas, temporary offices, laydown areas, warehouses and the like facilities and including a summary of principal work items and significant quantities, etc.

(2) Contractor's Corporate Policy on Health and Safety Management

A description of the Contractor's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Contractor's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Site Personnel

A description of the health and safety management organisation at Site headed by the Contractor's Health and Safety Officer at Site and showing the responsibility and authority of all persons involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country to be complied with for the health and safety management of the Works, unless superseded by JSSS. If superseded by JSSS then the relevant clause number of JSSS shall be inserted.

(5) Contractor's Safety Certification and Implementation Policy

NK see query in Chapter 1 (item 1.5) and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under item C1.

The following clauses have also been added to JSSS Chapter 1.

Unless otherwise expressly stated in the Bidding Documents, the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

An authorised true copy of the current certification shall be provided in this part of the Bid and shall subsequently be included with the Contract.

The Contractor shall describe the implementation policy of risk assessment.

(6) Temporary Works

NK this requires to be added, as it is an essential part of the Safety Plan

Description of the arrangements for controlling risks arising from the use of Temporary Works to ensure that the requirements of JSSS Chapter 1: Temporary Works, **Clause 1.25.8** are fulfilled.

(7) Safety Measures for Contractor's Equipment ~~and Temporary Works~~

Requires changing due to the above added clause

A description of the procedures for inspecting and maintaining Contractor's **Equipment and Temporary Works together with all spare parts including inspections prior to shipment**, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(8) Health and Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving workers feedback and opinions regarding health and safety.

(9) Plans for Health and Safety Education and Training

An outline description of the proposed education and training methods and facilities including participants, time, teaching materials, policies for selecting educators and trainers, etc. and covering new-entrant education.

(10) Deployment of Health and Safety Related Facilities and Personal Protective Equipment (PPE)

A description of the intended policies for the deployment of facilities and equipment to reduce health and safety risks, detailing the items and methods for providing and replacing general Personal Protective Equipment (PPE) and the use of additional PPE for particular working conditions and environments.

(11) Health and Safety Rules

A description of the general health and safety rules (e.g. limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site. If a specific work area, condition or environment requires detailed rules, this shall be stated and detail will be developed in later issues of the Safety Plan.

(12) Site Safety Inspection Plan

A description of the methods for on-Site inspections showing the locations and frequencies. The description shall also include the methods for reporting, recording and utilising results.

(13) Site Security

A description of the proposed Site security methods explaining how, access to the Site by third parties, neighbours, nearby residents and any other trespassers upon the Site will be prevented. The description shall include the provision and control of entry and exit gates, barriers etc.,

security posts, security patrols and any other measures to reasonably ensure their health and safety.

(14) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

(15) Prevention of Construction Accidents at Site

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures).

(16) Emergency Response Plan

A description of the Emergency Response Plan including the action plan for rescue of casualties in an emergency such as a major accident or disaster occurrence, work discontinuation, notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.

(17) Accident Relief Plan

A description of the Accident Relief Plan including the procedure for first aid at the location and time of any accident and a description of appropriate medical facilities to be provided at the Site, including for example nurse, doctor, ambulance etc. all as stated in the Bidding Documents. The procedure shall also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(18) Facilities for Maintaining the Occupational Health Environment

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

(19) Work Discontinuation Criteria

A description of the proposed criteria for discontinuation of work and person responsible for issuing instructions for such discontinuation for example when danger is predicted for work due to strong wind, heavy rain, snow or other factors

(20) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings and **5S activities**

(21) Legal Remedies and Requirements after Occupational Accidents

A description in brief of the legal requirements and remedies in the case of injuries and death at work and for personnel affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

C3. Clarifying the Bid Evaluation requirements by including evaluation of Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section III. Evaluation and Qualification Criteria, 1, Evaluation, 1.1 Evaluation of Technical Bids.

In the paragraph stating [Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI, Works Requirements.]

Insert “and Safety Plan” in the third line after the words, “work methods”.

Insert the following additional sentence at the end of the above paragraph “Evaluation of the safety plan shall take account of the Health & Safety Officer and the Temporary Works Designer in 1.1.2 Personnel and of safety equipment from the Safety Plan in 1.1.3 Equipment.” after the words “in Section VI, Works Requirements.”

C4. Ensuring that reference in Bidding Documents is to “Health and Safety Officer”, not the “accident prevention officer” and also adding Temporary Works Designer:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders Section III. Evaluation and Qualification Criteria against 1.1.2 Personnel,

Delete positions 2 and 3 as stated and insert as follows:

- 2 Health and Safety Officer at the Site
- 3 Temporary Works Designer (*if this is a specified requirement or proposed by the Bidder - refer to JSSS, Chapter 1: General, Part C, Item C1*)
- 4 Other personnel to be inserted as appropriate.

C5. Including Bidders Safety Declaration (BSD) in the Bid and Contract:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms

Include the attached “Form BSD - Bidders Safety Declaration” in the Bidding Documents after the existing Form-ACK, as new page BF-56; renumber existing pages BF-56 and BF-57 appropriately and insert suitable reference in the Table of Forms on page BF-1.

The Employer prefers that the Bidder has already appointed the Health and Safety Officer at the Site prior to Bid submission however if for any reason this appointment has not been made at Bid stage, this form can be signed by the Contractor’s Head Office Senior Health and Safety Manager

Form BSD:

Bidders Safety Declaration

I, *[insert name and position of authorized signatory]*, being duly authorized by *[insert name of Bidder/members of joint venture (“JV”)]* (hereinafter referred to as the “Bidder”) to execute this Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans, hereby certify on behalf of the Bidder and myself that all information provided in the Bid submitted by the Bidder for *[insert Loan No and name of the Project]*

I, *[insert name and position of authorised signatory]*, being duly authorized by *[insert name of Bidder/members of joint venture (“JV”)]* (hereinafter referred to as the “Bidder”) to execute this Form-BSD hereby declare our commitment to comply with the requirements of the JICA Standard Safety Specification (JSSS).

I further declare on behalf of the Bidder, that if selected to undertake services in connection with the Contract, we will ensure that the Site is established and maintained as a healthy and safe workplace for the Employer’s Personnel and the Contractor’s Personnel and any other persons entitled to be thereon or that may be affected by operations thereby and that the Bidder is aware and accepts to follow all of the relevant health and safety Laws of the Country and the requirements of JSSS.

Irrespective of any Laws of the Country and the enforcement or otherwise of same, the Bidder hereby declares that he has given full and careful consideration, fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor’s Equipment, Personal Protective Equipment, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder further declares that all Works shall be carried out under the control of our qualified and expert health and safety management and where not available in the Country, we will import for sole use upon the Works:

1. New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for purpose and all to meet with the approval of the Engineer.
2. New or recent Contractor’s Equipment (not more than 5 years old unless otherwise pre-inspected and approved by the Engineer) all fit for purpose, in full working order, safe, clean, non-polluting, complete with all necessary spare parts and consumables and suitable for use on the Works, and

... that all of the above will be used for the purpose intended.

The Bidder further declares that he shall find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.

The Bidder further declares that he (and his subcontractors) shall:

1. Employ workers with appropriate skill, qualification and capability,
2. Fully inform workers about hazards,
3. Provide health and safety training to all Contractor’s Personnel and Employer’s Personnel **in** a language and vocabulary they can understand.
4. Keep accurate records of work-related injuries and illnesses.
5. Perform tests in the workplace, such as air sampling as required **by JSSS**.

Is this covered?

6. Provide required new personal protective equipment at no cost to workers and ensure that this

- is used properly and kept in good condition,
7. Provide eyesight and hearing exams or other medical tests **required by JSSS.**
Ditto?
 8. Post injury and illness data where workers can see them.
 9. Notify the Engineer and Employer and other statutory authorities within 8 hours of a workplace fatality or within 24 hours of any work-related accident, injury or illness.
 10. Not retaliate against workers for using their rights under the Law of the Country.

The requirements and this declaration shall apply fully to all of the Bidder's subcontractors, suppliers and specialists for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if he is successful with his Bid, the Contractor's Health & Safety Officer at Site, named below and also included in Bidding Forms, Form PER -1: Proposed Personnel, unless otherwise stated in the Bidding Documents, shall be assigned from the Commencement Date, full time upon the Site of the Works and shall not be replaced or substituted at any time except with the express approval in writing of the Engineer.

If our Bid is accepted we agree that this Declaration together with all other documents comprised in our Bid Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidders Official Representative)

Name:

Date: _____

Company Stamp

Signed:

(Bidder's Proposed Health and Safety
Officer at Site)

Name:

Date: _____

C6. Defining procedures for submission and review of Method Statements and Safety Plans, not presently included in FIDIC:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 4.1 Contractor's General Obligations	<p><i>Delete that part of the fifth paragraph of this Sub-Clause which states:</i></p> <p>The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.”</p> <p><i>and in this place insert:</i></p> <p>(a) The Contractor shall, whenever required by the Engineer, submit Method Statements and Safety Plans each with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works or any part of the Works. The Contractor shall submit the requested information within seven (7) days of the date of the request.</p> <p>(b) The Engineer may review the Method Statements and/or Safety Plans and may give notice to the Contractor stating the extent to which the Method Statement and /or Safety Plan does not comply with the Contract. Within 14 days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no such notice within 21 days of the date of receipt of the Method Statement and/or Safety Plan, the Contractor shall proceed in accordance with the Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within 7 days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within 14 days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(d) The Contractor shall submit a revised Method Statement and/or Safety Plan whenever required by the Engineer or when any previous Method Statement and/or Safety Plan is inconsistent with actual conditions or requirements prevailing at the Site in accordance with the requirements described in items (a) to (c) above.</p>
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C7. Including JSSS as a part of the Contract with some further safety requirements:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause 4.8 Contractor’s Health and Safety Obligations</p>	<p><i>Delete this Sub-Clause completely and replace with the following:</i></p> <p>The Contractor shall:</p> <ul style="list-style-type: none"> (a) Comply with all applicable health and safety Laws of the Country, all standards and regulations, (b) Comply with all applicable health and safety obligations specified in the Contract including those contained in the JICA Standard Safety Specification (JSSS) and which as an entire document is to be read and construed as an integral part of the Contract by virtue of this contract clause amendment; (c) Comply with all directions issued by the Contractor's Health and Safety Officer (appointed under Sub-Clause 6. 7 [<i>Health and Safety</i>] as amended by PC6.7; (d) Take care of the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed; (e) Keep the Site, the Works (and the other places (if any) where the Works are being executed) clear of unnecessary obstruction so as to avoid danger to these persons; (f) Provide fencing, lighting, safe access, guarding and watching of: <ul style="list-style-type: none"> (i) the Works, until the Works are taken over under Clause 10 [<i>Employer's Taking Over</i>]; and (ii) any part of the Works where the Contractor is executing outstanding works or remedying any defects during the Defects Notification Period; and (g) Provide any Temporary Works (including roadways, footways, guards and fences) that may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land and property. <p>In addition to the reporting requirement of sub paragraph (g) of Sub Clause 4.21 [Progress Reports] the Contractor shall submit to the Engineer details of any accident as soon as practicable after its occurrence and, in the case of an accident causing serious injury or death, shall inform the Engineer immediately.</p>
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	The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of persons and any damage to any property.
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C8. Modifying the safety reporting requirements of GC4.21:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 4.21 Progress Reports	In addition to the safety reporting requirements of sub paragraph (g) of Sub Clause 4.21 [<i>Progress Reports</i>] the Contractor shall submit to the Engineer details of any accident as soon as practicable after its occurrence and, in the case of an accident causing serious injury or death, shall inform the Engineer immediately. The Contractor shall, comply with the health and safety recording and reporting requirements of JSSS.
---	---

C9. Changing the accident prevention officer to the Health and Safety Officer:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 6.7 Health and Safety	In the second paragraph, delete the words “accident prevention officer at the Site” and insert “Health and Safety Officer at the Site ”
---	---

C10. Including JSSS and the Bidder’s Declaration in the order of Priority of the Documents and ensure that it prevails over the Specification:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 1.5 Priority of Documents	Delete sub-items (a) to (i) and insert the following sub-items (a) to (j): (a) the Contract Agreement (if any), (b) the Letter of Acceptance, (c) the Letter of Tender, (d) the Particular Conditions - Part A, (e) the Particular Conditions - Part B, (f) these General Conditions, (g) the JICA Standard Safety Specification (JSSS) and the signed Bidder’s Declaration, (h) the Specification, (i) the Drawings, and (j) the Schedules and any other documents forming part of the Contract.
---	---

Included to avoid the discrepancy that exists with the Contract Agreement where this is also

referred to (see below).

C11. Including JSSS and the Bidder's Declaration in the listing of documents included in the Contract Agreement:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions. Section IX. Annex to the Particular Conditions - Contract Forms

<p><i>[Option A: One-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p>In paragraph 2. delete sub-items (i) to (ix) and insert the following sub-items (i) to (x):</p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Bid ; (iii) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (iv) the Particular Conditions ; (v) the General Conditions; (vi) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (vii) the Specification; (viii) the Drawings; (ix) the completed Schedules; and (x) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
---	---

and:

<p><i>[Option B: Two-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p>In paragraph 2. delete sub-items (i) to (x) and insert the following sub-items (i) to (xi):</p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Technical Bid ; (iii) the Letter of Price Bid (iv) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (v) the Particular Conditions ; (vi) the General Conditions; (vii) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (viii) the Specification (ix) the Drawings; (x) the completed Schedules; and (xi) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
---	--

MD is also reworking the document and also revising all punctuation.

NK: Comments

DCI comment is in red

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA



***Japan International Cooperation Agency
(JICA)***

_____, 2020

Prepared: DCI for NK

Issue: 2

Revision: 0

Date: 25/07/2019

NK please note that the following is a basic suggestion that requires your further study and legal review with appropriate revision/correction.

NK: JICA shall make legal review because it is not included in our Services .

This is a matter between NK and JICA, I assume that NK will confirm this with JICA
The disclaimer is based in part on the FIDIC Documents

ACKNOWLEDGEMENTS

JICA have made reference to other relevant publications in the preparation of this document and parts of such other documentation may have been used in the preparation hereof. JICA gives source credit and expresses its appreciation for the use of all such other publications including:

- 1) Japanese Ordinance on Industrial Safety and Health

Japanese Act, Order and Ordinance listed below

Industrial Safety and Health Act

Order for Enforcement of Industrial Safety and Health Act

Ordinance on Industrial Safety and Health

Safety Ordinance for Cranes

Ordinance on Safety and Health of Work under High Pressure (*)

Ordinance on Prevention of Anoxia, etc. (*)

Ordinance on Prevention of Hazards Due to Dust(*)

Explosives Control Act (**)

Order for Enforcement of Explosives Control Act (**)

Ordinance on Explosives Control(**)

(*)Translated but old, (**)No English translation, Others are available but not completely updated

- 2) "OSHA Standard Part 1926 Safety and Health Regulations for Construction", as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A..
- 3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.
- 4) ICE - temporary works design? And others (scaffolding?)

NK: we don't refer to ICE. We refer to BS (Code of Practice such as BS 5975.)

- 5) ~~4) Conditions of Contract for Construction For Building And Engineering Works Designed By The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC); NK I think it better if this is not included. I have used FIDIC second edition for reference (GC4.8) but have not used it extensively.~~

NK: FIDIC is not necessary as JICA's SBD includes FIDIC MD.

(NK - Please confirm as above and insert further items as necessary to make this list comprehensive)

NK: we will do later.

Can we please discuss later.

Including FIDIC use also

DISCLAIMER

JICA has prepared and issued this document in good faith for the reference of project teams engaged under the Japanese ODA programme in order to encourage a higher standard of JICA intends that this document should represent a guide for health and safety management on its construction projects. JICA, (together with its consultants and other assistants engaged in the preparation hereof) will not accept or assume any liability or responsibility for any events or the consequences thereof deriving from the use of this document. The document is provided without any express or implied warranty, including without limitation, warranties of accuracy, completeness, fitness for purpose in general or in particular locations and non-infringement. This document is intended to provide general reference and shall not be relied upon in a specific legal situation or issue.

JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

NK: All numbering to check

If numbers are not used, explain why (e.g. Future issue etc.)

What about health issues? Statistically this is the biggest problem but there is really no mention

NK: Do you mean if the health issues are asbestos, dusts including silica and lead, chemicals, sunlight, diesel engine exhaust emissions, frequent loud noise, frequent or excessive use of vibrating tools, frequent or excessive manual handling of loads, stress and fatigue.

Yes in answer to your question and also health issues at Site in terms of what shall be provided as a guide and also:

Contractor should provide (or ensure) eyesight and hearing exams that do have a significant effect on safety and other mobility and medical tests that are reasonable, all to be stated in JSSS.

We should not rely on local Laws but should stipulate health requirements to make sure that the contractor complies with this.

This will also require the Contractor to assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.

We specify in 2.1 about dusts, noise and temperature. We do not specify about asbestos because the Laws of the country may have specified already and ODA projects may not handle asbestos except renovation works.

We surely cannot rely on local laws that in general JSSS is aiming to improve.

Renovation works occur frequently

Do you have any suggestion about health issues?

See above.

This also requires research of other standards but what about medical facilities on Site, medical tests and also treatment of endemic diseases in certain countries. AIDS is covered in FIDIC (although not so necessary now perhaps) but what about others? Malaria nets, dengue patrols (Singapore style) etc etc..

Also state criteria for provision of facilities at Site for example say related to the distance from Site to the nearest hospital. If say more than one hour provide a doctor(s) full time plus medical support plus nurses and reasonably equipped ambulance with driver.

Plus also same doctor and nurses may be able to provide a local JICA clinic?

All of the above requires coordination with GC6.8 but more clarity will be helpful as the present clause is frequently not applied properly.

Can we discuss further please, noting that this should really come from NK.

What do the Japanese regs. require?

The documents need to be comprehensive and helpful.

JSSS will be prepared at 2 stages. The 1st stage JSSS will cover the following table for basic and essential safety requirement and the 2nd stage will do for safety in sectors of road, river, tunnel, railway, etc.

Please can we discuss later, I am not sure if or how your ideas for later issues will work.

Chapter	Section	Clause
Employer's declaration		-
1. General Requirements <i>This JSSS mentions General.</i>		
2.General Safety Measures	2.1	Working site environment
	2.2	Risk control around the site
	2.3	Prevention of outsiders entering <i>This is usually termed Site Security and is governed by GC4.22</i> <i>NK: Please read 2.3 and give a suitable title.</i>
	2.4	Watching man and Signal man
	2.5	Fall prevention
	2.6	Falling objection
	2.7	Measures against extraordinary weather
	2.8	Fire prevention
	2.9	Nil <i>NK: We may use 2.9 for PPE.</i>
	2.10	Safety site management
		2.10.1 Information to Workers
		2.10.2 Appointment of Operation Leader
		2.10.3 Duty of the Operation Leader <i>NK: We may specify 2.10.2&3 in Chapter 1.</i>
		2.10.4 Life saving equipment for Works on Water <i>NK: We may specify this in xxx.</i>
		2.10.5 PPE <i>NK: We may specify PPE in 2.9.</i>
3. Underground objects and Overhead power lines	3.1	Underground objects
	3.2	Overhead power lines
4 Construction Equipment	4.1	General requirement
	4.2	Operation
	4.3	Transportation
	4.4 to 4.5?	<i>4.4&4.5 will not used but 4.6 will be 4.5.</i>
	4.6 4.5	Rental equipment
5. Transportation	5.1	General
	5.2	Truck
	5.3	Conveyors
6. Lifting and Sling Works		-
	6.1 General	
	6.2 Lifting works	6.2.1 Mobile cranes
		6.2.2 Other Cranes

	6.3-???	6.3-6- Lifting and Slings
7. Temporary Works	7.1	General
	7.2	Earth retaining and support earthworks??
	7.3	Coffering
	7.4	Scaffolding
	7.5	Walkway
	7.6	Work stages
	7.7	Temporary equipment
	7.8	Power facilities
	7.9	Welding works
8. Earth Works	8.1	General
	8.2	Manpower excavation
	8.3	Machine excavation
	8.4	Embankment
	8.5	Blasting
9. Foundation works	9.1	General
Why separate? Covered by 8 and 10 surely unless only Piling NK: Earth works and piling works are different, so they are separated.	9.2	Precast piling — in situ??, bored??
	9.3	Machine excavation foundation In-situ piling
	9.4	Open caisson and deep well foundation Earthworks?
		Basements and waterproofing
10. Concrete Works	10.1	Reinforcement Reinforcing bars works
	10.2	Formwork
	10.3	Concrete works in-situ/precast/prestressed??- Not yet determined by JICA to include precast/prestressed
11. River Works Diving works (Title will be reconsidered later.)	11.1	Diving works NK: Most dangerous works only will be specified.
		Coffer dams?? The 1 st stage JSSS will not specify other than diving works.

Above to coordinate later

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL

PART A: PREAMBLE NOTES

A1. Purpose and Objective:

JICA require that all parties engaged upon their ODA projects shall endeavour to establish and maintain a culture and environment where health and safety achievement is of the highest priority for all involved parties. The common goal shall be to achieve a zero accident rate, adopting the slogan of “Safety First”.

To assist with this objective, JICA have prepared and published this JICA Standard Safety Specification (hereinafter referred to as “JSSS”), which they hope will be adopted for future selected projects, by agreement with the executing agencies ~~and their consultants~~ on such projects.

NK: I think the executing agencies only agree to adopt JSSS with JICA, so consultants may be deleted?

Agreed and deleted

A2. Effectiveness

JSSS has been published on-line by JICA and it shall become effective and be incorporated by project employers and their consultants into the Bidding Documents (and therefore Contract) for particular projects on the date that the Loan Agreement (LA) for that project has been executed and where the parties to such LA have formally agreed to adopt JSSS as the technical basis for Health and Safety management on that project.

It is not intended to include or attach a hard copy of JSSS to Bidding Documents or the Contract for respective projects but a copy of JSSS shall be available on the JICA’s web site shown below:

[http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/_____](http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/)

A3. Incorporation of JSSS into Contracts

JICA require that the Employer, Engineer and Contractor will each print a hard copy of JSSS for their own reference and use and that all of these entities shall fully inform their personnel, subcontractor’s, sub-consultants, other all parties who are associated with the particular project of the existence, content and purpose of JSSS and the objectives thereof.

Reference to JSSS and incorporation of the required amendments into the Bidding Documents for any project and reference to JSSS on the website will be sufficient to deem incorporation of JSSS into the Contract for that project.

Unless otherwise agreed by JICA and the executing agency of currently on-going JICA funded projects and between the Employer and Contractor(s) on those projects, this JICA Standard Safety Specification shall not be applied to such projects.

Further updates and revisions to JSSS unless otherwise agreed with the Employer will be applied from the date that same are published

NK: I think it is not clear for me. Is this subject to variation? Can you describe this in other way?

I have already edited this before your comment. This requires further discussion but any new JSSS editions, which change requirements, IF they are to apply to ongoing projects will in principal constitute a variation to that Project.

In order that this JICA Standard Safety Specification can become an integral part of the Bidding Documents for particular projects and so that the requirements can therefore be implemented immediately after online publication of this document, the particular

instructions for alteration of the Bidding Documents by project employers and consultants are contained within this document in Part C of this Chapter 1: General. After making such modification to Bidding Documents for particular projects, the JICA Standard Safety Document shall be read and construed as a part of the Bid and therefore the Contract for that project.

It is the ultimate intention of JICA to formally update the separate “Standard Bidding Documents under Japanese ODA Loans” by incorporating the same instructions however in the meantime relevant changes shall be made in accordance with this Standard Safety Specification.

A4. General Requirements

JSSS shall not alter or limit a contracting party’s statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of Contracts.

Compliance with the JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.

Contractors shall ensure that all health and safety hazards and risks are properly identified, assessed, controlled and evaluated prior to commencement of any work. Only applicably competent persons may perform the specified activities. Where the Laws of the Country so state, the Health and Safety Officer (as defined herein) shall be qualified and legally registered as such in accordance with such Laws.

Similarly JSSS shall not limit or restrict the Contractor to the scope contained herein.

~~JSSS is an abbreviated document and therefore as a general rule, where JSSS contains insufficient or no technical regulations or detailed requirements then the related technical regulations of the Occupational Safety and Health Administration, (published by the United States Department of Labor and hereinafter referred to as OSHA) shall apply.~~

~~If any ambiguity or discrepancy is found in JSSS, the Engineer shall issue any necessary clarification or instruction.~~

~~The JICA Standard Safety Specification prescribes minimum requirements and the parties are free to include higher standards when so agreed between Contractor, Employer and Engineer.~~

~~Above is transferred to Part B, Clause 1.4~~

All Parts (A, B and C) of this Chapter 1: General, are to be read and construed collectively as integral parts of JSSS and therefore constitute integral parts of the Contract for the Project.

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL

PART B: TECHNICAL REQUIREMENTS

1.1 Employer's Safety Declaration

By entering into a Contract, the Employer (together with the Engineer acting as his consultant) declares that he shall collaborate in good faith with the Contractor and take all reasonable measures within his authority and under his control to promote the highest achievable health and safety standards in the execution of the Works all in accordance with his contractual and statutory responsibilities and adopting the slogan:

“SAFETY FIRST”

The Contractor shall aim to achieve “Zero Accident” in the execution of the Works taking full responsibility for the health and safety management of the Works, adopting JSSS that specifies the minimum safety requirements that the Contractor shall implement.

A Bidder's Safety Declaration has been prepared and is included in Part C of this Chapter 1: General.

1.2 Definitions and Abbreviations

NK: There are so many words are used in the technical parts in the JSSS such as Construction Equipment, Electrician, 5S, KY.

JICA and NK consider to make Annex Definitions as shown in the Manual of Army Corps of Engineers below instead of Definitions and Abbreviations in Chapter 1.

DEPARTMENT OF THE ARMY EM 385-1-1, U.S. Army Corps of Engineers

Manual No. 385-1-1 30 November 2014 SAFETY AND HEALTH REQUIREMENTS

https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_385-1-1.pdf

pp 844 APPENDIX Q Definitions

This appendix defines the following terms for the purposes of this manual.

Abrasive blasting: the forcible application of an abrasive to a surface by pneumatic pressure, hydraulic pressure, or centrifugal force.

Accident Prevention Plan (APP): a document that outlines occupational safety and health policy, responsibilities, and program requirements.

Can we consider if Definitions and Abbreviations will be in ANNEX or APPENDIX of JSSS?

At this stage, I suggest that “Contractual definitions” that relate mainly to Chapter 1 General Requirements, should stay in the main text, the same as FIDIC as they are to be read and construed with that Chapter of the Document.

“Technical definitions” relating to terms used in other sections, perhaps can be an annex/appendix for convenience as can abbreviations and acronyms.

As OSHA is used as basic reference and as it has its own definitions why not use that? I am not confident about using a different source e.g. US Army although probably not as it will require editing even to fit with OSHA but please leave this with me. It depends what you have used and stated already in Section 2 onwards, which in the main we have not yet seen. Whichever is chosen will require considerable editing and coordination to

ensure that it is correct and that it fits in with all other documents, including Chapter 1, Conditions of Contract, usual Bidding Documents and English language, expressions, construction vocabulary etc. which are used extensively by JICA and FIDIC already. It may be easier to compile our own.

1.2.1 In this JICA Standard Safety Specification the following words and expressions shall have the definitions stated:

- (1) “**Health and Safety Officer**” or “**HSO**” means the Contractor’s health and safety officer at Site to be appointed by the Contractor in accordance with PC6. 7 [*Health and Safety*] and named by the Bidder in his Bid.
- (2) “**Method Statement**” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in PC4.1 [*Contractor’s General Obligations*].
- (3) “**JICA Standard Safety Specification**” or “**JSSS**” means the document of this title published officially by JICA on their website, issue number __ dated ____ and as may be modified in part or in whole by the Bidding Documents for the Project.
- (4) “**Safety Plan**” means a document that contains the risk assessments and shows the details of the safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety throughout the execution of the Works or any part of the Works, as referred to in PC4.1 [*Contractor’s General Obligations*].

“**Safety Plan**” shall also mean the “occupational health and safety plan”, “health and safety plan” and “safety plan” all described as such in JSSS and other documents contained in the Contract. *This is not necessary if references are consistent*

NK: According to the above, “Safety Plan” shall be used through JSSS, and “The Health and Safety Plan” and “The Particular Health and Safety Plan” shall not be used any more, which was not our shared understanding among JICA and NK.

Correct but references in the present draft documents are not consistent and therefore will tend to confuse. We recommend that simple use is better i.e. “Safety Plan” with a definition as above which makes it all encompassing. Simple is better to control throughout the text of the document.

Our understanding is as follows:

Bid stage: Method Statement and Health and Safety Plan

JICA Standard Bidding Documents refers to this simply as “Safety Plan” (Section IV. Bidding Forms BF-33. Why change it?

As an aside from a general contractual obligation there is little or nothing written on the subject of “health” so why add the unnecessary wording?

Work Commencement stage: Updated Method Statement and Health and Safety Plan from the Bid Stage

See later text where we have allowed for the further detail at Contract Stage. It should be complete and comprehensive at this stage, why not? I understood that we are trying to promote improvement rather than accepting that the system cannot change.

FIDIC second edition requires this why should we assume differently?

I also feel there is misunderstanding of method statements and safety plans, these are different and not necessarily connected. The fact that more information might be required on one does not mean it is required on both.

Furthermore this information is within the Contractor’s domain and if submitted it is for information only. This is frequently abused by consultants who believe (incorrectly) that

they have a right to instruct the contractor (via submission, review and rejection) how to perform the Works and how to manage safety.

A project safety plan should cover all risks in all parts of the Works including for example Confined Spaces, hazardous areas etc. etc. and it should not require update before separate parts actually start on Site. It might do which is why the I have made ot clear in the contract that the Engineer can request. However I feel that it is a wrong and even dangerous principle for an engineer to continue requesting submissions when there is actually no known purpose.

What will the Engineer do with all of this information noting that:

- 1. It is the contractor's obligation anyway*
- 2. It is submitted basically for information only*
- 3. If however there are "errors or defects" in any document then please note the requirements of GC 1.8 that may well alter legal responsibilities.*

Working stage: Particular Method Statement and Particular Health and Safety Plan for each work or section.

See above notes

Method Statement and Health and Safety Plan shall propose in general and principle as much as possible in Bid stage.

Disagree, it must be as detailed ass possible and more so than it usually is now.

Particular Method Statement and Particular Health and Safety Plan shall propose in detail for actual works based on the Method Statement and Health and Safety Plan.

Disagree -please see above notes. I have included the facility for particular safety plans but am not at all comfortable with this.

Is there any good way to express our above understanding?

I cannot explain better in writing, can we discuss later.

- (5) The phrase "health and safety" shall be construed as covering "occupational health and safety".
- (6) "**Project**" means the particular Works and services to be implemented by the Borrower and described in the agreement with and utilising the funds provided by the Bank under the terms mutually agreed for that purpose.
- (7) "**GC**" and "**PC**" followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (8) "**OSHA**" means the technical requirements of "OSHA Standard Part 1926 Safety and Health Regulations for Construction", published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A.

The following (9) and (10) are related with definitions, however I think it seems better to mention in different clause.

Correct and I am considering this now

- (9) Unless otherwise evident from the text, reference in OSHA to "team leader", "on-site supervisor", "On-site supervision", "Field superintendent", "work chief" and the like shall be collectively construed as reference to "the Contractor's Representative" and reference to the "safety and health manager of the contractor" and the like shall be collectively construed as reference to the Contractor's "Health and Safety Officer". "The construction plan and safety and health plan", shall be construed according to the

terms for such similar documents required by the Contract.

- (10) If any ambiguity or discrepancy is found in the OSHA documents, the Engineer shall issue any necessary clarification or instruction.

NK: the JSSS is not prepared based on OSHA. We mention about OSHA as follows in technical parts of JSSS:

We agreed with JICA that we specify specific part/section,/clause of OSHA, not all of OSHA because if we refer to all OSHA, we are not necessary to specify requirements in JSSS. The JSSS shall refer to OSHA as 1) for reference, 2) in accordance with, and 3) can be applied.

Ex.

- 1) For requirements not provided in the Laws of the Country and in the JSSS, the Contractor shall take necessary measures for fall prevention referring to the following: (Our draft in English states subject to which is a little different from Japanese.)*

OSHA Subpart M – Fall Protection

- 2) The Contractor shall take safety measures in accordance with requirements specified in the following OSHA regulations other than mentioned in this Chapter:*

OSHA Subpart D—Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

- 3) Notwithstanding the above, it is possible to have workers use protective equipment in accordance with the following*

OSHA Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.

NK: I wonder (10) may be “If any ambiguity or discrepancy is found in the OSHA documents specified in JSSS, ...”

Please can we discuss. I have written so much to explain this already, it is clear that there is a basic lack on mutual understanding.

Such specific reference to OSHA has not been made, Subpart M for example does not cover all missing items. Fall Protection Nets for example can be Japanese codes not subpart M,

***From what little we have seen so far**, there is so much missing from JSSS that some sort of “catch-all” is required otherwise it appears incomplete, this is why I have advised already to add further items and make it as comprehensive as possible. There is time.*

- (11) Any reference to “Contractor” within this document shall also be deemed to include “all Subcontractors”, for whom the Contractor shall remain fully responsible.

NK: Can the above (11) be covered by the following GC?

GC 1.1.8 4.4 Subcontractors: The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if they were the acts or defaults of the Contractor.

Not really, the meaning and intention is different, this refers to the coverage of JSSS not the responsibility of the Contractor.

- (12) JSSS shall form a part of the Contract for the Project and therefore the definitions contained in the Conditions of Contract for Construction For Building and Engineering Works Designed by the Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally to

JSSS.

NK: The contents of this section seem to be confused in terms of randomly placing definition items and abbreviated items. Criteria of selecting terms is hard to understand. Can we define all of Falsework, Formwork, Fall restraint system and Personal fall arrest system and others defined now in each technical chapter in Annex?

To some extent yes but I am aware of this and it will be suitably arranged in future maybe all or partially as an Annex. However in the present draft, I am preparing and compiling definitions (and related aspects) as I come across them or feel that there is a need before they are overlooked. It is my method of preparing or evolving the document.

- (13) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (14) “**Formwork**” means temporary containment structures for in-situ concrete and its immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.

Requires further research:

(15) “**Fall restraint system**” means a fall protection system that prevents the user from falling any distance. The system shall comprise of either a body belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard and may also include a lifeline and other devices.

(16) “**Personal fall arrest system**” means a system used to arrest a user in a fall from a working level. The personal fall arrest system comprise an anchorage, connectors, a body harness and may also include a lanyard, deceleration device, lifeline, or suitable combination of these. The use of a body belt for fall arrest systems is prohibited.

1.2.2 In this JICA Standard Safety Specification the following abbreviations shall have the meanings stated:

JIS	Japanese Industrial Standards.
ANSI	American National Standards Institute.
BS	British Standard.
BSEN	British Standard European Norm.
ISO	International Organization for Standardisation.
ASTM	American Society for Testing and Materials.

1.3 Scope of Application

1.3.1. JSSS has been drafted to apply to JICA ODA Loan Projects and to the relevant Conditions of Contract for Construction For Building and Engineering Works Designed By The Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions.

NK: The CC has been mentioned in 1.2.1(12). May we refer to the 1.2.1 (12)?

Not really the purpose is different however I will look at this further.

JSSS shall also apply to other JICA assisted Projects that have been awarded under different forms of contract including those under Contractor design contracts and contracts under the JICA Grant Aid programme.

When so used, suitable modification shall be required to the definitions and text of JSSS and

the Bidding Documents for those Projects to ensure compatibility and consistency with the relevant contract requirements for the project, reflecting the same intentions, standards and procedures for improving safety.

1.4 Laws and Reference StandardsThe Contractor shall comply with the Laws of the Country, including all health and safety standards.

1.9.2 If the Employer has formally agreed with JICA to adopt JSSS for the Project, then the technical requirements of JSSS shall apply and these shall prevail over the technical requirements of Laws of the Country without altering or limiting the Contractor's legal duties and obligations under such Laws.

NK: In case the requirements of Laws of the Country is higher standards than JSSS, the Laws shall be adopted.

Yes please refer to 1.9.7 below

1.9.3 Otherwise where the Laws of the Country (including any health and safety standards) are silent on particular health and safety requirements and where provisions are included in JSSS then JSSS shall apply and prevail.

1.9.4 JSSS is an abbreviated document and therefore as a general rule, where JSSS contains insufficient or no technical regulations or detailed requirements then the related technical regulations of the Occupational Safety and Health Administration, (published by the United States Department of Labor and hereinafter referred to as OSHA) shall apply.

NK: As we mentioned in 1.2.1 (10), we agreed with JICA that we specify specific part/section,/clause of OSHA, not all of OSHA because if we refer to all OSHA, we are not necessary to specify requirements in JSSS as we can state all technical parts of OSHA shall be applied.

What about safety nets for example in fall protection, is this to be OSHA or can it be Japanese regs.?

So far we agreed with JICA that the JSSS shall refer to OSHA as 1) for reference, 2) in accordance with, and 3) can be applied.

We are better to discuss again this clause 1.4.4 with JICA from the view points of legal basis as you explained in you last visit.

Is the following understanding correct?

In case that the serious accident at the site occurred though the Contractor followed the JSSS, there is a possibility that the Contractor claims the Employer /JICA damage compensation by the accident with the reason that the JSSS neither cover all safety requirements nor have legal basis.

Japanese law and regulations are not all translated in English and updating of English version is not made day to day. Therefore, Japanese Reg. cannot become legal basis. OSHA will become legal basis and easy to refer to..

When OSHA is specified as mentioned in 1.4.4, I wonder bidders may not estimate properly because they are not familiar to detail requirement of OSHA, then they will allow extra safety cost.

I also afraid that at the site the Employer/Engineer can enforce requirements of OSHA to the Contractor. The Contractor may always make minor breach of Contract.

Can you explain again to persuade JICA to contain this clause 1.4.4.

Please can we discuss further

1.9.5 If any ambiguity or discrepancy is found in JSSS, the Engineer shall issue any necessary

clarification or instruction.

1.9.6 The JICA Standard Safety Specification prescribes minimum requirements and the parties are free to include higher standards when so agreed between Contractor, Employer and Engineer.

1.9.7 In any event, if the Contractor ascertains that any part of JSSS is of a lesser standard to any of the particular Laws of the Country, then the Contractor shall inform the Engineer and shall then comply with the particular Laws of the Country (including any occupational health and safety standards).

1.9.8 The reference standards used in JSSS can be substituted with alternative standards after requesting and obtaining the consent of the Engineer who may give such consent only if in his opinion such alternative standards provide an equivalent or higher standard of health and safety than that required by JSSS.

1.9.9 Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used shall be that applicable at the Base Date.

1.9.10 Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.5 Contractor's Safety Certification

NK please confirm if this certification is required and if so is it to be a Bid Qualification requirement (we do recommend that it is). Refer to Part C where I have made this optional

NK: This is ideal, however it restrict bidders depending on scale of Works. We will discuss with JICA. I am not confident Japanese and local contractors can bid with the certification.

It is intended as a target and if JICA and contractors are serious about improving safety they should aim to obtain this, many already have.

However I have suggested that this is optional and I recognise that it may not perhaps be suitable for some projects – please refer to Part C Item C1 and also the phrase below - Unless otherwise expressly stated in the Bidding Documents

1.5.1. Unless otherwise expressly stated in the Bidding Documents, the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

1.5.2. An original or authorised true copy of the current certification shall be submitted with the Bid (refer to Chapter 1: General, Part C, item C.2. (5)) and shall subsequently be included with the Contract.

1.5.3. The Contractor shall submit original or authorised true copies of all current updates to the Engineer when due.

1.6 Safety Plan

1.6.1 The Contractor shall be required to submit an overall Safety Plan at two stages:

- (1) Safety Plan at Bid Stage.
- (2) Safety Plan at Commencement Stage.

In addition the Contractor shall provide such further overall or updated or particular Safety Plans as may be necessary due to current circumstances or conditions at the Site or as required by the Engineer in accordance with PC4.1 [Contractor's General Obligations]

1.6.2 Safety Plan at Bid Stage: for requirements refer to JSSS Chapter 1: General, Part C: Required Amendments to The "JICA Standard Bidding Documents".

1.6.3 Safety Plan at Commencement Stage:

NK – this is revised to incorporate some of the requirements of FIDIC second edition clause 4.8

“Particular Safety Plans” are not necessary and have no meaning when the following is considered in conjunction with revised clause 4.8 (see Part C, item C.6 and C.7)

NK: We would like to specify Particular Safety Plans for each work or section which describe actual safety measures at the site because we cannot expect the Safety Plans at Bid Stage and Commencement Stages describes in detail.

I suggest that we should encourage and expect this, not to anticipate a continuing failure to comply.

We want the submission of Particular Safety Plan is the Contractor’s obligation but not depending on the Engineer’s request.

This is of course NK prerogative but I do need to raise this as I do not recommend this approach. Why are we not accepting the accepted international legal approach to this as recognised by FIDIC? What is so different about our projects and what are we to do with the information so obtained?? Please see earlier notes also.

Consider if this should be “plan” or “manual” at commencement?

NK: We are better to use plan and not to mix the FIDIC second edition because JICA uses FIDIC MD 2010 now.

OK

- (1) Within 28 days of the Commencement Date and not less than 21 days before commencing any work at the Site, the Contractor shall submit to the Engineer for information a Safety Plan showing the Contractor’s proposed safety management polices, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works, in the comprehensive detail required by the Bidding Documents and Annex 1 to this Chapter 1: General, Part B. This shall be based upon the Safety Plan submitted at Bid Stage developed as necessary to provide the full information required.

This Safety Plan shall be in addition to any other similar document required under applicable health and safety Laws of the Country.

NK: We think this clauses shall be put in the PC 4.8.

OK, this is separated because I wanted to avoid copying and also this is where it is in the NK draft.

- (2) The Safety Plan shall set out or refer to all the health and safety requirements:
 - (a) That are stated in JSSS;
 - (b) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and
 - (c) that are necessary to effect and maintain a healthy and safe working environment for all persons entitled to be on the Site and other places (if any) where the Works are being executed.
- (3) Requirements for submission by Contractor and response (if any) by the Engineer, shall be in accordance with PC4.1 [Contractor’s General Obligations]

- (4) The Safety Plan (or parts of it) shall be revised or supplemented where considered necessary by the Health and Safety Officer, or at the reasonable request of the Engineer. Each revision of the Safety Plan shall be submitted promptly to the Engineer in any event not less than 21 days before commencing any parts of the Works at the Site, such that the Engineer is made aware in writing of at least the following information for each part of the Work:
- (a) Work outline and work procedure.
 - (b) Safety management system and responsibility and authority of Contractor's Personnel.
 - (c) Risk assessment.
 - (d) Safety measures.
 - (e) Personal Protective Equipment (PPE) for the Contractor's Personnel.
 - (f) Safety education and training of the Contractor's Personnel and Tool Box Meeting (TBM).
 - (g) Teaching materials used in education, training and pre-operation TBM before work.
 - (h) Method of information sharing and communication among the Contractor's Personnel.
 - (i) Implementation and monitoring of measures for health and safety management.
 - (j) Emergency response.
 - (k) First aid response.

1.6.4 If items other than the above are necessary due to the nature of work, the contents of this **Specification** shall be supplemented by referring to the provisions of the work concerned.

NK: Is this Specification to be read Safety Plan?

It is not clear. Please note this is taken directly from the NK draft.

Please clarify

1.6.5 The Contractor shall also consider the opinions of the Contractor's Personnel in preparing all Safety Plans.

1.6.6 In performing risk assessments the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on Personal Protective Equipment.

1.6.7 The Contractor shall ensure that all of the Contractor's Personnel and Employer's Personnel are fully informed of all hazards and risks on the Site.

Included elsewhere?: *Clear signage shall be exhibited to warn all such personnel and any others that are likely to be on the Site whether legitimately or otherwise of all potential hazards and risks.*

NK: 2.3 Measures of Non-entry and other Section of JSSS mentions no-entry.

OK

1.6.8 The procedural flow of risk assessment shall be as follows:

- (1) Identifying.
- (2) Evaluating .
- (3) Determining measures for avoidance or reduction.

.. to avoid further risks by or during the execution of the Works

NK: 1.6.8 may be made together with 1.6.6.

Our draft include the following:

The procedure of risk assessment is as follows.

(a) Identifying hazards

(b) Evaluating risks

(c) Determining measures of risk reduction

Priorities for considering and implementing risk reduction measures shall be in the following order and as far as is practicable measures of the higher priority shall be taken.

(a) Removal of hazards such as eliminating dangerous works

(b) Changing to a safer construction meathod, and alternating to low risk processes, operations, materials or equipment

(c) Engineering measures

(d) Management measures

(e) Use of protective equipment

OK

1.7 Contractor's Health and Safety Management Staff

1.7.1 Requirements for the Contractor's Health and Safety Officer (HSO):

- (1) If the HSO has been named in the Bid or Contract, the Contractor shall assign that named HSO upon the Works and prior to the Commencement Date.
- (2) If the HSO has not been named in the Bid or Contract, the Contractor shall, prior to the Commencement Date, submit to the Engineer for consent, the name and particulars of the person the Contractor proposes to appoint as the HSO. If consent is withheld or subsequently revoked in terms of GC6.9 [*Contractor's Personnel*], or if the appointed person fails to act as HSO, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.
- (3) The HSO shall be an employee of the Contractor and not of a subcontractor or consultant and unless otherwise stated in the Contract shall be assigned full time upon the Works and his/her responsibilities, authority and duties shall be in accordance with PC6.7 [*Health and Safety*].
- (4) Prior to the Commencement Date and in advance of the appointment of the HSO at Site, the Contractor's senior head office health and safety officer HSO may be assigned in this capacity until the HSO is appointed as above.
- (5) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (6) The HSO shall possess any qualification for such position if required by the Laws of the Country and also (if so required) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (7) The HSO shall be fluent in the language for communications defined in GC1.4 [*Law and Language*] and also the language of the Country.

NK: (7) Language request of HSO is too much. He/she can get translator for English and/or local language.

OK I will revise according to your instruction,

NK please give an opinion on the following suggested qualification:

NK: The following request “minimum 10 years in construction business and minimum 10 years of experience in safety and management”. It is not likely or quite a rare case.

This part may be such as “minimum 10 years in construction and minimum, say, 5 years in safety management.

OK I will revise according to your instruction,

- (8) Where there is no legal requirement under the Laws of the Country for qualification, the Contractor's HSO, shall have appropriate academic and health and safety qualification, work experience in construction (minimum 10 years) and in health and safety management (minimum 10 years, can be concurrent with construction experience) and whom the Contractor considers is qualified to perform the duties subject to receiving the consent of the Engineer.
- (9) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his/her duties.
- (10) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for HSO including additional managers, assistants and inspectors all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.
- (11) The HSO (where necessary with the assistance of his qualified support staff) shall personally be capable of ensuring that:
 - (a) All working areas of the Site are inspected on a regular basis (every working day and at least twice per shift) to detect if any unsafe practices or conditions exist.

NK: at least twice per shift is too many. (At least once is practical)

OK I will revise according to your instruction,

- (b) If such unsafe actions, practices or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this not possible then to suspend that part of the Works until such action has been taken.

Such inspections attended by the HSO, may also include the attendance of the safety representative of the Engineer.

1.8 Health and Safety Officer – Scope of Duties

1.8.1 The HSO shall devote his/her full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.8.2 The particular scope of duties of the HSO shall cover (but shall not be limited to) the

following:

- (1) Health and Safety Management Work:
 - (a) Preparation of Safety Plans, implementation, evaluation and improvement thereof.
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel and Employer's Personnel.
 - (c) Provision of activity records in progress reports.
 - (d) Detection through constant inspection and implementation of corrective measures for any unsafe conditions at the Site and unsafe behaviour or practices of the Contractor's Personnel and Employer's Personnel.
 - (e) Consultation on safety management with the Employer and the Engineer.
 - (f) Issuing instructions for suspension of the Works or parts thereof in case of accident or the like.
 - (g) Responding to accidents, creating and implementing measures to prevent recurrence.
 - (h) Reporting and consulting with the Employer's Personnel including when an accident occurs or an accident situation is likely.
 - (i) Appointment of health and safety inspectors and assistants.
- (2) Instructing the Contractor's Personnel and Employer's Personnel to take improvement measures for maintaining health and safety and preventing accidents.
- (3) Checking the health status of the Contractor's Personnel.
- (4) Planning and implementation of various training and education implementation plans.
- (5) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including lost time records and near-miss cases.
- (6) Preparing regular internal and external reports on health and safety activities.
- (7) Hazard prediction activity (Kiken Yochi: KY).

Does this have international meaning?

NK: Can we say like hazard prediction training in TBM such as Kiken Yochi(KYT) adopted in Japan (K: kiken (hazard), Y: yochi (prediction), T: (training))?
JICA wants to introduce KYT as an example of Japanese Safety Culture.

Yse - I will revise according to your instruction,

1.9 Contractor's Health and Safety Committee

(NK I Suggest that "Safety Committee" has better international meaning than "Safety Council"??)

NK: We think Committee is suitable.

OK

1.9.11 The Contractor shall create an internal Safety Committee for the purpose of effective health and safety management.

1.9.12 Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) Contractor's Health and Safety Officer at Site.

- (3) Medical and first aid staff.
- (4) Contractor's Senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors representatives, health and safety personnel, site staff.
- (7) Representative of Contractor's workers on Site.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Other necessary personnel.

1.9.13 The Chairman of the Safety Committee shall be the Contractor's Health and Safety Officer at Site.

1.9.14 The Contractor shall hold a regular Safety Committee Meeting for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meeting: At least once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Monthly or weekly schedule of important health and safety matters.
 - (c) Accidents, injuries and measures to prevent any recurrence.
 - (d) Hazards, safety and health problems resulting from:
 - (i) Site inspections by HSO.
 - (ii) Issues raised by the representative of Contractor's workers on Site.
 - (iii) Issues raised by subcontractors.
 - (iv) Issues raised by others.
 - (e) Feedback on the regular safety, coordination and other meetings with the Engineer.
 - (f) Safety instructions received from the Engineer.
 - (g) Items to be coordinated with police, fire department and other related organisations.
 - (h) Compliance and registration matters under the Laws of the Country.
 - (i) Safety and health awards, media attention and the like.
 - (j) Other matters.

1.9.15 Report on the Safety Committee Meeting

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.10 Engineer's Regular Safety Meeting

1.10.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to make commitments on health and safety matters on behalf of the organisations that they

represent:

- (1) Frequency of the meeting: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Monthly or weekly schedule of important health and safety matters
 - (c) Accidents, injuries and measures to prevent any recurrence.
 - (d) Hazards, safety and health problems resulting from:
 - (i) Inspections by the Engineer and the Employer.
 - (ii) Site inspections by HSO.
 - (iii) Issues raised by the representative of Contractor's workers on Site.
 - (iv) Issues raised by subcontractors.
 - (v) Issues raised by others.
 - (e) Status of resolution of previous problems.
 - (f) Items to be coordinated with police, fire department and other related organisations.
 - (g) Compliance and registration matters under the Laws of the Country.
 - (h) Safety and health awards, media attention and the like.
 - (i) Other matters.

1.10.2 Report on the Engineer's Regular Safety Meeting:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven days after the meeting.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer with a further copy provided directly to JICA.

NK - I suggest that this direct report will be necessary and useful, as it will provide JICA with the direct information they will need for statistical monitoring information and also early and official warning on potential and major issues.

If it is included in JSSS as this suggests, then the Employer will be deemed to have agreed to its use and cannot object later to such direct reporting.

NK: The above is good suggestion. We can ask JICA. The submission will be JICA office at the Country.

Suggest also that the following might be helpful; I have made this optional in Part C.

NK: We think 1.12 only may be sufficient to coordinate on Safety in the Project. JICA may not want many committee.

This is only suggested for larger projects (e.g. MRT projects) with many packages and contractors where a common and standard approach is essential. I assume that JSSS must cover all common types of project:

1.11 Project Safety Committee

1.11.1 On larger projects with multiple contractors, if required by the Bidding Documents

for that Project, the Employer or Engineer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire project team.

1.11.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.11.3 The Chairman of the Safety Committee shall be the Employer.

1.11.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.

1.11.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

1.12 Health and Safety Coordination with Other Contractors

1.12.1 Refer to GC2.3 and GC4.6 regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer, and
- (3) the personnel of any legally constituted public authorities,

... who may be employed in the execution on or near the Site of any work not included in the Contract.

NK: Is this a part of (2)?

No, it is all, please refer to GC4.6.

In relation to (1) and (2) above, the Employer shall ensure that such personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC4.8 [*Safety Procedures*] and GC4.18 [*Protection of the Environment*].

In relation to (3) above the Contractor shall ensure that such personnel are fully informed of the Contractor's Safety Plan and shall liaise and agree with such authorities to ensure that their personnel comply with the Contractor's Safety Plan.

NK suggest the following 2 paragraphs be added from HSE:

NK: Agree.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements and risk assessments) may be needed from other contractors who will be working at the Site. The Contractor is therefore required to contact such other contractors directly and liaise with them to obtain all such other information and incorporate this into the Safety Plan.

When risks arise because of potential interactions between the Contractor and other contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Contractor shall take a positive role in ensuring the general principles of risk prevention and control are applied amongst all contractors involved.

1.12.2 The **Bidding Documents shall clearly describe** any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's

Personnel will be working together with a clear description of the such works and the location, timing and other conditions for such work.

NK: Bidding Documents state such employment by the Employer. Therefore, 1.12.2 can be deleted. It is always difficult to clearly inform the timing. We feel JSSS may not state "The Bidding Documents shall clearly describe..."

I have specifically worded this way as I understand that JSSS is not only for Contractors, it must also be for Executing Agencies (Employer's and their consultants) who are preparing the Bidding Documents.

The Bidder/Contractor must be made aware as early as possible

1.12.3 If the above circumstances apply, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meeting: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities.
 - (c) Accidents, injuries and measures to prevent any recurrence.
 - (d) Status of resolution of previous problems.
 - (e) Items to be coordinated with police, fire department and other related organisations.
 - (f) Compliance and registration matters under the Laws of the Country.
 - (g) Safety and health awards, media attention and the like.
 - (h) Other matters.

1.12.4 Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) ~~A copy of this report shall be submitted to Employer, the Contractor and contractors~~ within seven days after the meeting.
- (3) A further copy shall be included in the Engineer's monthly progress report.

NK: The report shall be prepared by the Engineer because this meetings are organized by the Engineer.

Already corrected

1.13 Contractor's Health and Safety Management Activities

1.13.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.13.2 Health and safety management activities shall include (but are not limited to):

- (1) Overall Management Activities:
 - (a) Tasks of the Health and Safety Officer as described above.
 - (b) Arranging, chairing, attending meetings as described above.

- (c) ~~Arranging, chairing~~—attending ~~pre-work~~ meetings, ~~pre-start~~ meetings, schedule meetings.
TBM also?
- (d) Monitoring the implementation of the Safety Plan.
- (2) Management of Contractor's Personnel:
 - (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, toolbox meetings, providing general advice and instruction, specific instructions on individual works, safety confirmations, information to be conveyed etc.
 - (b) Instruction and management of 5S Activities (Seiri: sorting, Seiton: tidying, Seiso: cleaning, Seiketu: cleanliness, Shituke: discipline).
Does this have meaning internationally ?
NK: Can we say like site clearing and training activities such as S Activities (Seiri: sorting, Seiton: tidying, Seiso: cleaning, Seiketu: cleanliness, Shituke: discipline), to introduce KYT as an example of Japanese Safety Culture.
 - (c) Instruction and management of hazard prediction activity (Kiken Yochi: KY).
Ditto
NK: As mentioned above, can we say like hazard prediction training in TBM such as Kiken Yochi(KYT) adopted in Japan (K: kiken (hazard), Y: yochi (prediction), T: (training))? JICA wants to introduce KYT as an example of Japanese Safety Culture.
Of course yes to the above
 - (d) Instruction and management of safety education and training.
 - (e) Instruction and management of various safety measures.

1.14 Monitoring

- 1.14.1 The Contractor shall develop and implement systems to ensure that compliance with the Safety Plan is monitored efficiently and transparently at all times, for which purpose the Contractor shall:
- (1) Create checklists for monitoring.
 - (2) Carry out regular and irregular monitoring of implementation status.
 - (3) Monitor failed, unsafe or non-compliant conditions.
 - (4) Create files and safe storage systems for the monitoring records.
 - (5) Copy all relevant information to the Engineer as requested by the Engineer.

1.15 Joint Site Safety Inspections

- 1.15.1 In addition to the Contractor's own daily Site Safety Inspections described above, the Contractor shall also conduct regular Joint Site Safety Inspections with the Engineer or (if appointed) the safety representative of the Engineer. Respective safety staff may also attend.
- 1.15.2 Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.15.3 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.16 Engineer's Safety Representative

(NK what is the future intention? Will a safety engineer be appointed in future on all projects or will the Engineer act in this capacity?)

This requires a more detailed procedure, the following is an outline suggestion only This requires further coordination and development with other sections (e.g. scaffolding) so that joint safety and certification and "safe for use" procedures can be implemented if required) without affecting the Contractor's overriding responsibility.

NK: I have no idea of this procedures. I think the Engineer to check the Contractor's safety management and measures if they follow the Contract. JICA may want the Engineer to do joint safety and certification and "safe for use" procedures.

If TOR of the consultancy services include the such procedures, safety experts shall be assigned with his/her MM.

Without commitment of such input, I cannot agree to these procedures.

Please refer to Part C where I have made further reference.

I understood that JICA wanted the Engineer to somehow play a more proactive role so would like to discuss this with you to ascertain the future intentions

- 1.16.1 *On large projects*, the Engineer shall appoint an assistant under GC3.2 to be known as the Engineer's Safety Representative (ESR) and who shall be responsible for health and safety within the Engineer's organisation on Site and for monitoring the Contractor's compliance with the Contractor's Safety Plan. By written notice served under GC3.2, the Engineer shall delegate authority to the Engineer's Safety Representative to represent the Engineer in matters of health and safety at Site, to issue written instructions to the Contractor on matters of health and safety and monitor compliance with such instructions which shall include:

NK: The ESR may be assigned as Full-time or concurrent safety supervisor. The Employer always hesitate to assign foreign safety expert because of cost. For enforcing JSSS, it needs experienced and competent safety engineer.

Can we please discuss further so I can understand what you want to do.

- (1) Instructions requiring the Contractor's compliance with the Safety Plan.
- (2) Emergency instructions to Contractor to stop working where the Engineer observes accidents, near-misses or unhealthy or unsafe conditions.
- (3) Instructions requiring the Contractor to change the working methods at the Site to improve health and safety.

1.16.2 The Engineer's Safety Representative shall cooperate and work closely with the HSO and will represent the Engineer on Joint Site Safety Inspections and also undertake independent and regular inspections of the Works at the Site.

1.16.3 The Engineer's Safety Representative shall give safety compliance instructions to the Contractor in accordance with his/her delegated authority under GC3.3.

1.16.4 The Contractor shall take corrective action within the time limit prescribed in the instruction, shall keep the Engineer's Safety Representative fully informed on

progress and shall report in writing when the corrective action is completed.

- 1.16.5 If the Bidding Documents state that the appointment of a full-time or part-time Engineer's Safety Representative is not required (refer to Chapter 1: General, Part C), it is to be assumed that the Engineer shall act in this capacity.

Communications may require more thought and definition. Who is to issue and receive? Can be direct HSO and ESR.

NK: All correspondence shall be made between the Contractor and the Engineer, not HSO and ESR as usual.

There may be a requirement for direct (urgent) communication on some safety issues.

1.17 Safety Statistics

1.17.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.17.2 Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, casualties, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes of them.
- (7) Record of report to the labour standards office.

NK: The labour standards office (which is Japanese office may be changed to the concerned office such as labour office?)

Understood

- (8) Number of health and safety staff, contents, frequency, participant, duration of safety education at site and safety event.
- (9) Others.

1.17.3 All data shall be in a format and content to meet with the approval of the Engineer.

1.17.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the safety representative of the Engineer for validation and mutual agreement.

NK: It shall be the Engineer's Safety Representative as same as 1.16.

OK will change but it was intended that this daily data would be submitted direct for instant checking and validation by assistants in a close working relationship then the final version submitted as below.

1.17.5 The data shall subsequently be compiled and included in the Monthly progress report.

1.18 Safety Reports

1.18.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, improvement.
- (2) Joint Site Safety Inspections.
- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report can be submitted as an attachment to the Contractor's monthly progress report.

1.19 Health and Safety Records

1.19.1. The Contractor shall keep the following records related to health and safety:

- (1) Records of accidents and near-misses, occupational accidents.
- (2) Records of all meetings for safety and health management.
- (3) Record of monitoring of safety and health management activities.
- (4) Record of health and safety education and training for the Contractor's Personnel.
- (5) Records of health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.

1.20 Proper Placement of Contractor's Personnel

1.20.1 Further to compliance with GC6.9, the Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.

The HSO shall countersign all such records to indicate his/her confirmation of the suitability of each member of the Contractor's Personnel prior to their placement.

These records shall be available for the Engineer's inspection at any time.

1.20.2 Suitability of Contractor's Personnel and their work assignment shall be assessed in consideration of:

- (1) Work content and work environment.
- (2) Work experience and ability etc..
- (3) Health condition, and health condition before daily work starts.
- (4) Allocation of an achievable and safe work volume.
- (5) Allocation to workers under 18 in accordance with GC6.21.

NK: I could not review all items of 1.17 to 1.19 today, I will check later.

No problem

1.21 Placement and ID of Personnel for Works Requiring a License

1.21.1 If for any of the operations at Site, the Laws of the Country require operating, supervising or any other personnel to have a licence, particular qualification, registration or certification the Contractor shall ascertain that all such personnel possess and maintain such documentation.

1.21.2 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for his personnel and shall independently test all personnel to ascertain that they do possess sufficient knowledge, qualification and skills.

1.21.3 The Contractor shall implement an identification (ID) pass system whereby all

personnel on Site carry an ID pass with name, photograph, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any worker is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that he resolves the situation without delay by removing the offending person from the Site immediately and appointing a suitable replacement.

1.22 Health and Safety Education and Training

1.22.1 The Contractor shall conduct health and safety education and training for all of the Contractor's Personnel.

1.22.2 The Contractor shall include in the Safety Plan the outline of the education and training plans (participants, time, teaching materials, policy of selecting educators and trainers). In addition, the Contractor shall submit full details of such education and training to the Engineer for his information before the start of such education and training.

1.22.3 Education and training shall be provided free-of-charge to the trainees, conducted during normal working hours, trainees shall be paid and the Contractor shall bear all necessary expenses.

1.22.4 **Safety induction** For general education and training of new entrants upon the Site and those who are scheduled to change work type, skill or location, the following subjects shall be included:

- (1) Chain of command and communication methods for the work.
- (2) Hazard or danger of machinery, equipment, raw materials, etc., and methods of dealing with such hazards or danger.
- (3) Performance and handling methods of safety devices, personal protective equipment (practical on-Site training).
- (4) Hazardous substance control devices (practical on-Site training).
- (5) Work procedures generally.
- (6) Inspection before start of the work.
- (7) Maintaining a orderly, tidy and clean Site.
- (8) Emergency measures and evacuation at the time of accident etc..
- (9) Health and safety rules.
- (10) Causes and prevention of diseases that may occur in relation to the work concerned.
- (11) Other matters necessary for health or safety related to the works concerned.

1.22.5 For education and training of Contractor's Personnel who are planned to be assigned to dangerous or harmful work (for example as listed in Annex 2), such personnel shall be given the same general education and training as above plus further special education and training pursuant to the work in which such personnel are to be engaged.

NK: Dangerous and harmful works here can be limited to those in Annex 2, not such dangerous works with hand tools.

The intention of this clause is to clarify works that needs special knowledge and skill, which are specified in Japan.

Can we please discuss further as whilst I understand that there are specified training requirements in Japan these are different outside Japan.

Please also refer to our comments on Annex 2

The Contractor shall determine the educational subjects and teaching hours for the special education and training with reference to Annex 3.

Special education for the work concerned may be omitted in full or in part for any personnel who the Contractor has ascertained, holds valid qualification issued by an acknowledged public organisation of the Country and who has finished comprehensive training by the public organisation of the Country or acceptable training in another country and whom the Contractor ascertains as having equivalent and sufficient knowledge and skills for all or part of items of the special education

1.22.6 For education and training of Contractor's Personnel who are to be appointed as operation leaders as co-workers with each team of workers engaged upon such work at the Site (for example as listed in Annex 4 and 5), such personnel shall be given the same general education and training as above plus further special education and training pursuant to the work in which such personnel are to be engaged.

The Contractor shall determine the educational subjects and teaching hours for the skill-training course with reference to Annex 5.

Special education for the work concerned may be omitted in full or in part for any personnel who the Contractor has ascertained, holds valid qualification issued by an acknowledged public organisation of the Country and who has finished comprehensive training by the public organisation of the Country or acceptable training in another country and whom the Contractor ascertains as having equivalent and sufficient knowledge and skills for all or part of items of the special education.

1.22.7 Education and training personnel

Education and training lecturers can be Contractor's Personnel who are experienced, academically qualified and (if legally required) registered as a teacher or lecturer under the Laws of the Country, fluent in the language of the Country or external lecturers similarly qualified and registered.

In case of absence of availability of such suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary qualification, ability and experience, subject to the receiving the advance consent of the Engineer.

1.22.8 Records of education and training

The Contractor shall create and store records of trainees, showing full details of training subjects and their capability, achievements etc., and permit the Engineer to inspect these as and when required by the Engineer.

1.22.9 Explanation of health and safety rules to persons other than the Contractor's Personnel

The Contractor shall provide general health and safety education courses to the Employer's Personnel and to any other persons who are permitted to enter the site.

1.23 Emergency Response Plan

1.23.1 The Contractor shall prepare an Emergency Response Plan as a part of the Health and Safety Plan in order to promptly and appropriately respond to natural disasters, fires, and other emergencies that may occur during construction.

NK please note:

Natural disasters include typhoons, earthquakes etc. which are actually GC19 Force Majeure situations for which, the contractor is not responsible and he has no obligation to give any

such automatic “response”.

What is the actual required extent of the Contractor’s “response”? What manpower and equipment is he to provide? How can this be predicted and estimated?

What about the Employer’s and Engineer’s own plans and what about the availability of the rescue services etc. in the Country?

These arrangements appear to be onerous upon the Contractor.

Can we please discuss and consider this further to understand the purpose and intention.

We have edited the following to make it readable but do not agree with the content.

NK: We specified for the natural disasters which is not GC19 Force Majeure situations. We expect the Contractor to prepare the natural disaster which may be occurred by the weather or earthquake of magnitude between bad weather and earthquake, and Force Majeure situations. The bad weather and earthquake are specified in JSSS 2.7 Measures against Adverse Weather and Earthquakes, which I want to send it in English you soon.

I will wait to receive your document on this subject so I can understand your intentions.

In addition, the Contractor shall fully inform the Employer’s Personnel, Contractor’s Personnel and all other persons entitled to be upon the Site, of the detail of the Emergency Response Plan. The Contractor shall also establish an emergency call system and carry out training based on the Emergency Response Plan.

The Emergency Response Plan, shall: include the following items:

- (1) Expected types of emergency situation.
- (2) Describe the emergency call system.
- (3) Explain the specific measures for emergency response.
- (4) Include measures for quickly establishing affected persons and locations, define assembly points and the like.
- (5) Permit fast changes and revisions to be made in response to changes in the Site situation.
- (6) Be submitted to the Engineer as part of the Safety Plan, and be updated as necessary throughout the Time for Completion of the Works.

1.23.2 The Contractor shall establish an Emergency Call communication system that will require confirmation from all contact persons even in the event of an emergency. This shall include the creation of an emergency contact list, which shall be posted it in a visible location such as the Contractor’s Site office as informed to all personnel.

The emergency contact list shall include name of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer’s Personnel.
- (2) Relevant government authorities and agencies: administrative agencies, police stations and fire stations etc..
- (3) Contractor’s Personnel at the Site, particular individuals positions, head office etc., subcontractors, material suppliers and the like.

(4) Other contractors engaged upon the Site or the Works

1.23.3 The Contractor shall conduct emergency response training based on the Emergency Response Plan which shall include:

- (1) Implementing a training programme at least every six months.
- (2) Improving the emergency response plan based on training results.
- (3) Providing details of the emergency response.

The Contractor shall provide training for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be upon the Site.

Details of the training shall be included in the Emergency Response Plan and Safety Plan.

1.23.4 If and when an emergency occurs during the Time for Completion, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc. all as circumstances reasonably permit and as instructed by the Engineer.

1.23.5 The Contractor shall take measures such as the placement and installation of the following accident relief facilities and equipment, medical personnel, ambulances, etc.

NK See above queries, the Contractor usually has no such obligations for force majeure events, so if this is required it must be fully specified and paid for. Usually only the use of existing site facilities is allowable technically in accordance with the Engineer's Instructions (and payment by Employer).

We assume that the following "Emergency Relief Plan" actually means a plan for dealing with common accidents on the Site. This heading is a little misleading, I suggest change to something like "Accident Relief Plan" so there can be no confusion with "Emergency Response Plan"

NK: As I explain above, the Contractor shall prepare the plan for predictable weather, earthquake and others from the Contractor's experience.

This may complicate interpretation contractually where force majeure has accepted definition. In most countries earthquakes are not so common and extreme weather likewise.

What about health issues? The document is largely silent on this yet statistically this is the biggest problem.

NK: May I know what kind health issues you commented. We specify health issues such as dust, noise, heat are specified in JSSS 2.1 Working site environment.

See earlier notes.

1.24 Accident Relief Plan

1.24.1. The Contractor shall prepare an Accident Relief Plan in consideration of the nature and timing of the Works and the location(s) of the Site and taking account at least of the minimum facilities and measures to be provided in accordance with the Specification for the Contract (refer also to Chapter 1: General, Part C) and including:

- (1) Availability of medical personnel who can provide first aid and additional medical assistance.
- (2) Availability of vehicles and drivers that can properly transport casualties to clinics on Site or hospitals off the Site.
- (3) Establishment of first aid room, clinic or like facilities on Site with equipment and consumables.
- (4) Arrangement of communication facilities and measures for emergency response.
- (5) Deployment of first aid appliances, aids, instruments and medicines and kits in

accordance with the scale and characteristics of the Work.

- (6) First aid training, appointment of first aiders and dissemination of information.

It is to be noted that Chapter 1: General, Part C, lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.

1.25 Measures at the Time of Accident Occurrence

1.25.1. When an accident occurs, the Contractor shall immediately discontinue the work task and implement the following measures as necessary:

- (1) Safely locate, extract casualty and provide first aid and other accident relief activities
- (2) Secondary disaster prevention activities.

NK what does this mean? Why "disaster"

NK: "Disaster" is not correct, to be changed to "accident".

OK

- (3) Preserve the accident site, make safe and prevent anyone interfering or entering.
- (4) Discontinue construction work related to or in the vicinity of the accident.

NK This is a repeat of the above?

The work in which the accident occurred must be discontinued. (this is mentioned above.)

However, there are cases that other works which are related to or in the vicinity of the accident must be also stopped.

In this sense, this clause is not a repetition.

OK

- (5) Implement measures instructed by the Engineer.

What about automatic response by Contractor?

NK: The Contractor will automatically react according to (1) ~ (4).

May we know what else he shall respond.

OK but what is the Engineer likely to further instruct?

1.25.2. Report of accident occurrence, cause, investigation result and recurrence prevention measures.

The Contractor shall report the occurrence of an accident as follows in accordance with the Accident Relief Plan:

NK - The Emergency Response Plan is for natural disasters, it does not seem to apply here for normal accidents? The following is not yet edited

NK: The above comment is right. It is not appropriate to follow the Emergency Response Plan which is for natural disaster and fire.

Please delete "in accordance with the Accident Relief Plan:".

Please let me consider

- (1) First report of the accident: Report to the Engineer by phone or other means as soon as possible.
- (2) First report of the accident situation: Report the accident-related information to the Engineer on the form designated by the Engineer as soon as possible.

NK - Can we please attach an accident report form now? As an appendix, please let me have a draft and I will include

NK: I think not now.

OK but I thought we had one and it may be useful

- (3) Having investigated and established the cause, report on cause investigation of accident, situation on the site etc.: Report to the Engineer timely at any time.

NK - No time limit?

BK: Time necessary to research the accident cause would be different case by case of accident. Therefore, this is the reason to use the phrase "timely at any time".

However, it would be better to set the limit such as "not later than xx, but if it takes longer than the limit to finalize the report, the Contractor shall submit an interim report.

Yes, we will edit

- (4) Report on measures to prevent recurrence: Report on cause investigation and preventive measures to the Engineer within one week after the accident or within a period agreed with by the Engineer.

1.25.3. Resumption Procedure of Construction Work

The procedures for resuming construction work at the Site after the occurrence of an accident are as follows:

- (1) Contractor examines and formulates measures to prevent reoccurrence and submits it to the Engineer.
- (2) The Engineer reviews the preventive measures.
- (3) The Contractor applies for resumption of work to the Engineer after making concrete preparations for implementation of the preventive measures.
- (4) The Contractor resumes the construction Works with the consent of the Engineer.
- (5) The Contractor verifies the effectiveness of his preventive measures and informs the Engineer.
- (6) As necessary, the Contractor implements risk assessment and changes work plan.

1.26 Temporary Works

The following are draft notes, this is probably to be transferred and dealt with later in Chapter 7.1 but some reference may be necessary here.

Please leave this here for now and we will coordinate this (and other parts) later. There is cross reference to this clause in Part C.

NK: I will send you 7.1 as soon as possible JICA gave us their draft of JSSS.

- 1.26.1. The Contractor shall provide details at Bid stage (not calculations necessarily at this stage?) of all Temporary Works (TW) designs including Falsework for significant structures as listed in the Bidding Documents (refer to Chapter 1: General, Part C) and including for example:

- (1) Falsework equal to or higher than 3.5 m.
- (2) Overhead passage equal to or higher than 10m (bridge?)
- (3) Scaffolds ("scaffolding"?) equal to or higher than 10m can engineer check scaffolding design?.)

What is the Engineer required or intending to do with such information?

NK: The Engineer can review design document by the Engineer's design expert if he is assigned. If not, the Engineer shall review the design procedure and designs with his experience of TW.

This could be dangerous, reliance needs to be placed upon the contractor's specialists not the engineer. The check should be to ascertain that the Contractor has engaged and used such specialists. The Engineer does not (and should not) represent himself as an expert on temporary works (falseworks) design.

Also if calculations and methods are submitted at Bid stage it could be construed that they have been checked and accepted by the Engineer and if future failure occurs responsibility may be affected or if future change is made by engineer, variation may be claimed.

Please let me study the future document when we receive it and I will then discuss further.

(4) Other TW specified in the Contract or instructed by the Engineer.

NK can we please discuss the above to clarify these and further requirements after which we will re-word this

What about other items such as TW for major bridge structures, tunnels, coffer dams, temporary dams, etc. ??

NK: TW for others will be specified in JSSS be prepared in 2nd stage,

No need to specify separate procedures just list them here? Please can we discuss

1.26.2. Unless otherwise stated in the Bidding Documents, Bidders/Contractors are required to comply with BS5975 or other equal and internationally accepted standard as approved by the Engineer in respect of the design and management of TW.

NK: JICA does not want to refer to all parts of BS5975 as I send you JICA draft 7.1.

Why not?

We usually accept standards and apply them in total, it is unusual only to adopt only a part. Please note that my suggestion that compliance is optional anyway. Suggested on larger projects where complicated temporary structures will be necessary and cannot be avoided by the Engineer by alternative design.

1.26.3. Contractors are required to engage an independent TW Designer(s) (TWD) to meet with the consent of the Engineer and who shall remain under the Contractor's responsibility and management. This person/entity shall be listed and described by the Bidder in the Bidding Documents.

NK: Please refer to the JICA draft 7.1 which are not specified TWD, TWC, TW Coordinator and TWs, who are specified in general wording.

I will await the draft

1.26.4. Where so required by the Bidding Documents, Bidders/Contractors shall also coordinate TW, check TW designs and supervise TW effectively by engaging specialist staff including:

(1) TW Design checker(s).

(2) TW Coordinator(s).

(3) TW Supervisor(s).

- 1.26.5. The Engineer (**consultant during design stage**) shall consciously endeavour to remove or reduce risks in the Permanent Works through his own design (for example by changing high level in-situ concrete structures to precast structures, simplifying applied ceiling and high level wall finishes and the like).
- 1.26.6. The Engineer shall cooperate and work with the Contractor's TW designer(s) and where possible shall provide important information on the permanent works design etc.
- 1.26.7. The Contractor shall submit TW method statements, (including designs and calculations) when requested by the Engineer under the Contract.
- 1.26.8. The review does not normally include the check of the design calculations of the Temporary Works. The Engineer has no obligation under the Contract to review TW design however he should do so for TW considered by him to be of vital importance for safety. The Engineer's response (if any) shall be in accordance with the Contract. In accordance with GC3.1(c), any response from the Engineer shall be construed as provided in good faith and without prejudice to the Contractor's overriding responsibility for the TW.
- 1.26.9. The Contractor shall demonstrate by description in the Safety Plan that he has effective arrangements in place for controlling risks arising from the use of TW, by ensuring the following:
- (1) **Appointment of a Temporary Works Co-ordinator (TWC).** **CONSIDER**
- (2) Preparation of an adequate TW design brief.
- (3) Completion and maintenance of a TW register.
- (4) Production of a TW design by an independent and specialist TWD (including a design risk assessment and a TWD method statement where appropriate).
- (5) Independent checking of the Temporary Works Design.
- (6) Issue of a TW design/design check certificate, if appropriate.
- (7) Pre-erection inspection of the TW materials and components.
- (8) Control and supervision of the TW erection, safe use, maintenance and dismantling of the temporary works, including procedures to:
- (a) Check that the TW have been erected in accordance with the design and issue a formal "permit to load" where necessary.
- (b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the TW and issue a formal "permit to dismantle" where necessary.
- The procedure shall include measures to ensure that the design function, the role of TW designer and the supervision at Site for TW erection, maintenance and removal are all carried out by competent and experienced individuals.

1.27 Temporary Works Designer (TWD)

MD needs to consider and coordinate further

- 1.27.1. If the TWD has been named in the Bid or Contract, the Contractor shall assign that named TWD at the appropriate time.
- 1.27.2. If the TWD has not been named in the Bid or Contract, the Contractor shall, prior to the Commencement Date, submit to the Engineer for consent, the name and particulars of the person or entity that the Contractor proposes to appoint as TWD. If consent is withheld or subsequently revoked in terms of GC6.9 [Contractor's Personnel], or if the appointed person fails to act as TWD, the Contractor shall similarly submit the name and particulars of another suitable person or entity for such appointment.

- 1.27.3. The Contractor shall not revoke the appointment of the TWD or appoint a replacement without the prior consent of the Engineer.
- 1.27.4. The TWD shall possess any qualification for such position if required by the Laws of the Country and also (if so required) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- 1.27.5. Where there is no legal requirement under the Laws of the Country for qualification, the Contractor's TWD shall have appropriate academic and Temporary Works design qualification, work experience in construction (minimum 10 years) and in Temporary Works Design and whom the Contractor considers is qualified to perform the duties subject to receiving the consent of the Engineer.

ANNEXES TO PART B: TECHNICAL REQUIREMENTS

ANNEX 1: ITEMS TO BE DESCRIBED IN THE SAFETY PLAN

NK please note that text generally has been changed from Original so that this is coordinated with other changes basically to make it work better. Further MD coordination is required.

NK : I have no time to read these now. I will discuss these later.

OK

(1) Description of the Works

A description of the Works in outline and with overall layout plan to give an understanding of the overall layout and content of the Works showing main construction items and areas, roads, road access locations, working areas, storage areas, temporary offices, laydown areas, warehouses and the like facilities and including a summary of principal work items and significant quantities, etc.

(2) Contractor's Corporate Policy on Health and Safety Management

A description of the Contractor's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Contractor's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Contractor's Personnel

A description of the health and safety management organisation at Site headed by the Contractor's Health and Safety Officer at Site and showing the responsibility and authority of all persons involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country to be complied with for the health and safety management of the Works, unless superseded by JSSS. If superseded by JSSS then the relevant clause number of JSSS shall be inserted.

(5) Contractor's Safety Certification and Implementation Policy

NK see query in Chapter 1 (item 1.5) and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under item CI.

The following clauses have also been added to JSSS Chapter 1.

NK: We understand it, however let's consider this with JICA.

OK

Unless otherwise expressly stated in the Bidding Documents, the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

An authorised true copy of the current certification shall be provided in this part of the Bid and shall subsequently be included with the Contract.

(6) Temporary Works

NK this requires to be added as it is an essential part of the Safety Plan

Description of the arrangements for controlling risks arising from the use of Temporary Works by ensuring that the requirements of JSSS Chapter 1: Temporary Works, **Clause 1.26.9** are fulfilled.

~~(7)~~ Safety Measures for Contractor's Equipment and Temporary Works

Requires changing due to the above added clause

A description of the procedures for inspecting and maintaining Contractor's Equipment and Temporary Works together with all spare parts including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(8) Health and Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving workers feedback and opinions regarding health and safety.

(9) Plans for Health and Safety Education and Training

An outline description of the proposed education and training methods and facilities including participants, time, teaching materials, policies for selecting educators and trainers, etc. and covering new-entrant education.

(10) Deployment of Health and Safety Related Facilities and Personal Protective Equipment (PPE)

A description of the intended policies for the deployment of facilities and equipment to reduce health and safety risks, detailing the items and methods for providing and replacing general Personal Protective Equipment (PPE) and the use of additional PPE for particular working conditions and environments.

(11) Health and Safety Rules

A description of the general health and safety rules (e.g. limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site. If a specific work area, condition or environment requires detailed rules, this shall be stated and detail will be developed in later issues of the Safety Plan.

(12) Site Safety Inspection Plan

A description of the methods for on-Site inspections showing locations and frequency. The description shall also include the methods for reporting, recording and utilising results.

(13) Site Security

A description of the proposed Site security methods explaining how, access to the Site by third parties, neighbours, nearby residents and any other trespassers upon the Site will be prevented. The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.

(14) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

(15) Prevention of Construction Accidents at Site

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures).

(16) Emergency Response Plan

A description of the Emergency Response Plan including the action plan for rescue of casualties in an emergency such as a major accident or disaster occurrence, work discontinuation, notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.

(17) Accident Relief Plan

A description of the Accident Relief Plan including the procedure for first aid at the location and time of any accident and a description of appropriate medical facilities to be provided at the Site, including for example nurse, doctor, ambulance etc. all as stated in the Bidding Documents. The procedure shall also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(18) Facilities for Maintaining the Occupational Health Environment

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

(19) Work Discontinuation Criteria

A description of the proposed criteria for discontinuation of work and person responsible for issuing instructions for such discontinuation for example when danger is predicted for work due to strong wind, heavy rain, snow or other factors

(20) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings and 5S activities

(21) Legal Remedies and Requirements after Occupational Accidents

A description in brief of the legal requirements and remedies in the case of injuries and death at work and for personnel affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

ANNEX 2: DANGEROUS OR HARMFUL OPERATIONS

NK: I have concerns about whether the information in the following annexes is of any value in an international context, I think not. In a domestic Japanese sense these requirements are of course very important as they are integrated with many other Japanese laws and regulations. However when abbreviated extracts only are included it does not have great meaning, there appears to be much missing which may not be covered by the fall-back (OSHA).

Also skill training is included for operation leaders but no such skill training or checking is included for other skilled persons is this correct?

Please consider all very carefully.

I am inclined to suggest that a simple basic requirement such as GC6.9 is sufficient, perhaps adding some reference to training and making the contractor responsible for all is probably better than going into so much detail for only a part.

NK: we will reconsider and discuss with JICA about Annex 2.

Ok

The following is a list of example work types classified as “Dangerous or Harmful Operations”

When Contractor’s Personnel are engaged in the following or other potentially dangerous or harmful operations such personnel shall be given special health and safety training appropriate to the operations concerned.

Examples of such operations include (but are not restricted to) the following:

(as provided for by the Ordinance of the Ministry of Health, Labour and Welfare).

NK I requested a complete list at our last meeting however, according to the above Ordinance there are many more operations and requirements in addition to this list and also as this effectively applies only in Japan; is there a real need for this?

- (1) Crane operation and mobile crane operation
- (2) Welding and cutting of metal using arc welder *what about gas welders and cutting machines?*
- (3) Forklift operation
- (4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: ~~3t or more~~) *why 3t or more? Why not all?*
- (5) Vehicle-type construction equipment operation (for foundation work: ~~3t or more~~) *why 3t or more? Why not all? what about track type?*
- (6) Roller operation *what type?*
- (7) Operations that use organic solvents *what about other harmful substances and explosives for example?*
- (8) Sling work *meaning hoisting and rigging work*
- (9) Rope height work *cradles and hoists?*
- (10) Work to be performed using a full harness type of fall ~~protection prevention~~ device where the height is 2 meters or more and it is difficult to provide for the work floor *meaning of difficult? Too expensive? Is this coordinated with other chapters not possible*

What about small tools (drills and angle grinders) all electrical works, gas pipe works etc etc? and related academic educational achievements?

ANNEX 3: SUBJECTS OF SPECIAL EDUCATION FOR DANGEROUS OR HARMFUL OPERATIONS

When Contractor's Personnel are engaged in the following or other potentially dangerous or harmful operations such personnel shall be given special health and safety training appropriate to the operations concerned.

Examples of special training for the above listed sample operations include (but are not restricted to) the following:

- (1) Special education for crane operation and mobile crane operation:

Subject	Scope
1 Knowledge of mobile and other cranes	Type and model, main structural parts, operating device, safety device, brake function, handling method, method of inspection and maintenance
2 Knowledge about motor and electricity	Internal combustion engine, steam engine, hydraulic drive, danger from electric shock
3 Knowledge of mechanics necessary for operation of mobile crane and other cranes	Force (composition, decomposition, balance and moment), centre of gravity, load, wire rope, hook and hook strength, relationship between wire rope application and load
4 Practical skill	Method of mobile crane and other crane operation Signs for mobile crane and other crane operation

- (2) Welding and cutting of metal performed using arc welder

Subject	Scope
1 Knowledge of arc welding etc.	Basic theory of arc welding, basic knowledge about electricity
2 Basic knowledge on arc welding equipment	DC arc welder, AC arc welder, automatic electric shock prevention device for AC arc welder, welding rod and rod holder, wiring
3 Knowledge of arc welding work methods	Inspection and maintenance before work, methods of welding and cutting, inspection of welds, post-work measures, accident prevention
4 Practical skill	Handling of equipment for arc welding work

- (3) Forklift operation

Subject	Scope
1 Knowledge of equipment structure and handling methods for the travel of a forklift.	Structure and method of handling for forklift engine, power transmission device, traveling device, steering device, braking device, auxiliary device for traveling
2 Knowledge of equipment	Structure and handling method of hydraulic equipment

structure and handling methods for cargo handling	(including safety valve), head guard, backrest, auxiliary devices for cargo handling, method of inspection and maintenance
3 Knowledge of mechanics necessary for forklift operation	Force (composition, decomposition, balance and moment) weight, centre of gravity and stability of objects, speed and acceleration, load, stress, material strength
4 Practical skill	Operation of traveling, operation of cargo handling

- (4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: 3 t or more)

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods motors for vehicle-type construction equipment (for ground levelling, transportation, loading and digging), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance
4 Practical skill	Operation of traveling, operation of equipment for work

- (5) Vehicle-type construction equipment operation (for foundation work: 3 t or more)

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods of motors for vehicle-type construction equipment (for foundation work), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for foundation work), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for foundation work), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance

4 Practical skill	Operation of traveling, operation of equipment for work
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(6) Roller operation

Subject	Scope
1 Knowledge of roller	Types and applications of rollers, structure and handling method of Power transmission devices of rollers, working devices, steering devices, brakes, electrical devices, alarm devices and auxiliary devices, method of inspection and maintenance
2 Knowledge of general matters required for roller operation	Mechanics necessary for operation, construction method by roller
3 Practical skill	Roller operation method

(7) Operations that use organic solvents

Subject	Scope
1 Work environment management	Method of maintenance and inspection of equipment for venting prevention measures of organic solvent vapour and equipment for ventilation, Grasp and maintain the working environment
2 Work management	Work management method, occupational health protective equipment
3 Health management	Types and hazards of organic solvents, operations using organic solvents, health hazards caused by organic solvents, prevention methods and first-aid measures, medical check-up and follow-up measures
4 Accident case	Accident cases and prevention measures

(8) Sling work

Subject	Scope
1 Knowledge of cranes, mobile cranes, other cranes and derricks (hereinafter referred to as "cranes etc.")	Type and model, structure and function, safety device and brake
2 Knowledge of mechanics necessary for slinging work	Force (composition, decomposition, balance and moment), centre of gravity of simple figures and stability of objects, friction, weight, load
3 Method of slinging	Selection and use of the sling tool, basic work action (including safe operation method), method of signalling

4 Practical skill	Signs for operation, work with a sling for a crane
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(9) Rope height work

Subject	Scope
1 Knowledge of rope height work	Method of rope height work
2 Knowledge about main ropes etc.	Types of main ropes, structure, strength and handling methods, methods of inspection and maintenance of main ropes, etc.
3 Knowledge about prevention of occupational accidents	Measures for the prevention of occupational accidents caused by the fall, methods of using, maintaining and inspecting safety belts and protective helmet
4 Practical skill	Method of rope height work, inspection of main rope etc.

(10) Work to be performed using a full harness type of fall prevention equipment where the height is 2 meters or more and it is difficult to provide for the work floor

Subject	Scope
1 Work knowledge	Types of equipment used for work, structure and handling methods, methods for inspecting and maintaining equipment used for work, methods of work
2 Knowledge of fall prevention equipment (limited to full harness type, the same shall apply hereinafter)	Types and structures of full harnesses and lanyards for fall prevention equipment, methods for mounting the full harnesses, installation and selection methods for lanyards, methods of inspection and maintenance of fall prevention equipment, how to use the related equipment for fall prevention equipment
3 Knowledge about the prevention of occupational accidents	Measures to prevent occupational accidents due to fall, measures to prevent hazards due to falling objects, measures to prevent electric shock, methods of using protective helmet and methods of maintenance and inspection, and other accident due to work and its preventive measures
4 Practical skill	Method of using fall prevention equipment

ANNEX 4: WORK REQUIRING THE APPOINTMENT OF AN OPERATION LEADER

The following is a list of example work types that require the appointment and assignment of an operation leader as a co-worker to each team of workers engaged upon such work at the Site.

Such operation leaders shall be given special health and safety training appropriate to the operations concerned.

Examples of operations shall include (but are not restricted to) the following:

- (1) Earth excavation and shoring work
- (2) Tunnel excavation work
- (3) Tunnel lining work
- (4) Excavation work for quarrying
- (5) Formwork, falsework, supports and shoring assembly/dismantling work
- (6) Scaffolding assembly/dismantling work
- (7) Steel frame fabrication and erection work on buildings and structures
- (8) Steel bridge fabrication and erection work
- (9) Wooden, masonry and other building work
- (10) Demolition work of concrete or masonry structures
- (11) Reinforced concrete construction work
- (12) Organic solvent work and other hazardous substances or materials

ANNEX 5: SUBJECTS OF SKILL TRAINING COURSE

Examples of special training for the operations leaders shall include (but are not restricted to) the following:

What about skilled persons other than operation leaders?

NK: Operation leaders are most important worker to prevent accidents, therefore training is necessary by the Government/Training agencies or the Contractor.

Other skilled persons shall be trained or employed by the Contractor.

But if international standards differ which they do what is to apply? A ganger, charge hand or foreman for example can qualify through experience in some countries, so what training is to apply?

(1) Operation leader for Earth excavation and shoring work

Subject	Scope
1 Knowledge of work method	Method of ground excavation, treatment of loose rocks and buried objects, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock, and the type, material, structure, assembly drawing, maintenance and inspection of earth shoring, matters related to installation and removal of strut and wailing
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases, measures for preventing hazards, collapse prediction, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(2) Operation leader for tunnel excavation work

Subject	Scope
1 Knowledge of work method	Method of tunnel excavation, mucking, and types, structure and method of assembling of tunnel support, method of installing rock bolts
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases and toxic gases, measures for preventing hazards
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(3) Operation leader for tunnel lining work

Subject	Scope
1 Knowledge of work method	Types, materials, structure and assembling drawings, inspection and repair of tunnel support, method of

	assembling and dismantling tunnel support
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, instruments and tools, measures for preventing hazards, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(4) Operation leader for excavation work for quarrying

Subject	Scope
1 Knowledge of rock types, drilling methods for rock excavation, etc.	Types of rock, method of excavation for extraction of rock, treatment of loose rock, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases, measures for preventing hazards, collapse prediction, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(5) Operation leader for formwork, falsework, supports and shoring assembly/dismantling work

Subject	Scope
1 Knowledge of work method	Types and materials of form and form shoring, structure of form shoring, assembly drawings, inspection, etc. Methods of assembly and dismantling of form and frame shoring
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(6) Operation leader for scaffolding assembly/dismantling work

Subject	Scope
1 Knowledge of work method	Types of scaffolds, materials, structures and assembly drawings, methods of scaffold assembly, disassembly and change of work, inspections and repairs. Matters of structures and methods assembly, disassembly and changes of climbing bridges, protective shelf, etc.
2 Knowledge of construction	Handling of construction equipment and machinery,

equipment, machines, instruments, work environment, etc.	equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(7) Operation leader for steel frame fabrication and erection work on buildings and structures

Subject	Scope
1 Knowledge of work method	Types of buildings and towers, materials, structures, design drawings, shop drawings, equipment and tools, methods of work for assembling steel frames of buildings, etc., inspection
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(8) Operation leader for steel bridge fabrication and erection work

Subject	Scope
1 Knowledge of work method	Types of bridges, materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(9) Operation leader for wooden, masonry and other building work

Subject	Scope
1 Knowledge about constructing structural	Construction methods of main structural parts such as frame, floor structures, walls, construction methods of roof

members of buildings, installing floors, roofs, etc.	and outer wall foundation, joints, order of construction, reinforcement method for frame
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(10) Operation leader for demolition work of concrete or masonry structures

Subject	Scope
1 Knowledge about structural members including concrete masonry and reinforcement etc.	Types, structures, construction method of concrete and masonry work, types of method of construction, method of work, work plan, coordination with m & e services etc
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(11) Operation leader for reinforced concrete construction work

Subject	Scope
1 Knowledge of work method	Types of materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(13) Operation leader for organic solvent work and other hazardous substances or materials

Subject	Scope
1 Knowledge of health hazards and their preventive	Pathology, symptoms, prevention methods and first-aid measures of health problems caused by such materials

measures.	
2 Knowledge for improving the work environment	Properties of organic solvents, and other hazardous substances or materials management of equipment and other facilities related to production and handling of such materials, methods of evaluation and improvement of working environment
3 Knowledge of protective equipment	Type, performance, method of use and management of protective equipment pertaining to the production or handling of such materials
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

JICA STANDARD SAFETY SPECIFICATION (JSSS)

CHAPTER 1: GENERAL

PART C: REQUIRED AMENDMENTS TO THE “JICA STANDARD BIDDING DOCUMENTS”

[This Part C applies to executing agencies, employers and their consultants for use in the preparation of PQ and Bidding Documents, evaluation of Bids and award of Contracts]

JICA require that the amendments described below, shall be made to the “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA), October 2012, version 1.1.

The Bidding Documents for particular projects where JSSS has become effective as described in the above “Part A: Preamble Notes”, shall be amended in accordance with the following instructions:

C1. Specifying **Particular** Safety Requirements in Bidding Documents for Relevant Projects:

Part 1 – Bidding Procedures, Section I: Instructions to Bidders, Section VI. Works Requirements, Specification, pages WR-3 to WR-5

Add the following additional text on page WR-5 to follow on from the existing text.

NK: Addition here, JICA Standard Safety Specification (hereinafter referred to as “JSSS”)

Don't understand comment

JSSS contains comprehensive reference to the health and safety requirements for Projects and includes detailed requirements for the preparation, submission, review and response processes for Method Statements and Safety Plans for the execution of the Works.

Care shall be therefore be taken when drafting Bidding Documents for Projects that are to use JSSS to ensure that there is no duplication of the JSSS requirements in the Technical Specification for such Projects. Unnecessary and duplicated reference **must** be avoided.

It should be recognised that JSSS contains standard safety requirements that shall apply and prevail generally to relevant Projects and consequently it will be necessary to specify particular requirements applicable to individual Projects. Such particular requirements shall be carefully drafted and included in the **Technical Specification** of relevant Projects.

Technical Specifications shall therefore contain clear and precise descriptions covering such particular requirements including for example appropriate clauses for the following:

NK: The above Technical Specifications may be changed to Particular Safety Specification because the Items below are all related with JSSS?

Don't understand comment.

As “Specification” is used so much and Technical Specification is used by JICA I have used it here to make it very clear which is to apply

JSSS Chapter 1 Reference	Item
1.5 Contractor’s Safety Certification	State if the Bidder/ Contractor is required to be formally accredited under OHSAS 18001 and if so require submission of a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or equivalent

	from an internationally recognised and approved organisation
1.11 Project Safety Committee	State if a Project Safety Committee is to be established for the Project and add any further requirements.
1.12.2 Employer's other contractors (see also GC2.3)	Describe and if possible identify or describe the scope of any other contractors to be employed by the Employer on the Site and specify working areas and timing as far as possible.
1.16 Engineer's Safety Representative	State if the Engineer will appoint a full-time or part-time Safety Representative as an assistant upon the Works or if the Engineer will act in this capacity.
1.243.6 Accident Relief Plan	Describe the minimum measures and facilities to be provided in consideration of the nature and timing of the Works and the location(s) of the Site, including: <ul style="list-style-type: none"> (1) Medical personnel to provide first aid and additional medical assistance (2) Vehicles and drivers that can properly transport casualties to clinics on Site or hospitals off the Site. (3) First aid room, clinic or like facilities on Site and specify equipment and consumables (4) Communication facilities and measures for emergency response (5) First aid appliances, aids, instruments and medicines. (6) First aid training, appointment of first aiders and dissemination of information. (7) Include others as appropriate
1.26 Temporary Works (If requirements are applicable on the Project. If not required the Bidding Documents should clearly state this, noting that this can always be proposed by the Contractor)	<p>Temporary Works (TW) designs are required to be submitted with the Bid and updated during the Contract for the following significant structures:</p> <ul style="list-style-type: none"> (1) Falsework equal to or higher than 3.5 m. (2) Overhead passage equal to or higher than 10m (bridge?). (3) Scaffolds ("scaffolding"?) equal to or higher than 10m can Engineer check scaffolding design?. (4) Other TW specified in the Contract or instructed by the Engineer. <p><i>NK please refer to queries on this subject in 1.26</i></p> <p><i>NK: These are under reconsideration with JICA.</i></p> <p>Bidders/Contractors are required to comply with BS5975, yes or no?</p> <p><i>NK: We will discuss this and followings with JICA.</i></p> <p>State if any of the following are required to be assigned in</p>

	<p>relation to the Temporary Works:</p> <p>(1) Temporary Works Designer.</p> <p>(2) TW Design checker(s).</p> <p>(3) TW Coordinator(s).</p> <p>(4) TW Supervisor(s) .</p> <p>State if any other Temporary Works staff are required to be assigned?</p>
	<p>Is independent checking of the Temporary Works Design required?</p> <p>Is the Issue of a TW design/design check certificate required?</p>
<p>Others to add - MD</p>	

JICA stress the importance of the Employer putting in place a sound working environment for the Contractor, including for example reasonable Time(s) for Completion, reasonable, continuous and unobstructed access to the Site and sufficient Site area(s), working and storage areas, all wherever possible. These provisions shall be clearly described in the Bidding Documents.

NK: This sentence will be reviewed by JICA. We think these are well understood by the Employer.

Yes but this sentence was an earlier request by JICA which is why I have inserted it.

I think it is necessary as although NK may be clear on this other consultants are not.

C2. Specifying the required detail of Safety Plans in Bidding Documents:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Safety Plan, page BF-33.

Delete “[Insert Safety Plan]” and in this place insert the following:

Prepare the Health and Safety Plan including details of all items listed below:

It is understood that the Bid Stage Safety Plan will be developed by the Contractor in more detail in the Safety Plan issued at Commencement Stage and at later stages but it is important that at Bid stage sufficient information is provided so that the following can be understood and evaluated.

Irrespective of what the Bidder may include in his plans and of any subsequent acceptance, approval or consent to the same, the detailed requirements of JSSS will continue to apply and prevail unless otherwise specifically agreed later in writing by the Engineer.

NK For Bidding purposes, the following is a copy of Annex 1, please coordinate as necessary if changes are made to Annex 1 and make the same changes here.

NK: We will do.

(1) Description of the Works

A description of the Works in outline and with overall layout plan to give an understanding of the overall layout and content of the Works showing main construction items and areas, roads, road access locations, working areas, storage areas, temporary offices, laydown areas, warehouses and the like facilities and including a summary of principal work items and significant quantities, etc.

(2) Contractor's Corporate Policy on Health and Safety Management

A description of the Contractor's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Contractor's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Contractor's Personnel

A description of the health and safety management organisation at Site headed by the Contractor's Health and Safety Officer at Site and showing the responsibility and authority of all persons involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country to be complied with for the health and safety management of the Works, unless superseded by JSSS. If superseded by JSSS then the relevant clause number of JSSS shall be inserted.

(5) Contractor's Safety Certification and Implementation Policy

NK see query in Chapter 1 (item 1.5) and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under item C1.

The following clauses have also been added to JSSS Chapter 1.

NK: We have replied in Chapter 1.

Needs to be finalised

Unless otherwise expressly stated in the Bidding Documents, the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

An authorised true copy of the current certification shall be provided in this part of the Bid and shall subsequently be included with the Contract.

The Contractor shall describe the implementation policy of risk assessment.

(6) Temporary Works

NK this requires to be added, as it is an essential part of the Safety Plan

NK: We are discussing this in Chapter 7 TW.

Needs to be finalised

Description of the arrangements for controlling risks arising from the use of Temporary Works to ensure that the requirements of JSSS Chapter 1: Temporary Works, **Clause 1.26.9** are fulfilled.

(7) Safety Measures for Contractor's Equipment ~~and Temporary Works~~

Requires changing due to the above added clause

A description of the procedures for inspecting and maintaining Contractor's **Equipment and Temporary Works** together with all spare parts including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(8) Health and Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving workers feedback and opinions regarding health and safety.

(9) Plans for Health and Safety Education and Training

An outline description of the proposed education and training methods and facilities including participants, time, teaching materials, policies for selecting educators and trainers, etc. and covering new-entrant education.

(10) Deployment of Health and Safety Related Facilities and Personal Protective Equipment (PPE)

A description of the intended policies for the deployment of facilities and equipment to reduce health and safety risks, detailing the items and methods for providing and replacing general Personal Protective Equipment (PPE) and the use of additional PPE for particular working conditions and environments.

(11) Health and Safety Rules

A description of the general health and safety rules (e.g. limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site. If a specific work area, condition or environment requires detailed rules, this shall be stated and detail will be developed in later issues of the Safety Plan.

(12) Site Safety Inspection Plan

A description of the methods for on-Site inspections showing the locations and frequencies. The description shall also include the methods for reporting, recording and utilising results.

(13) Site Security

A description of the proposed Site security methods explaining how, access to the Site by third parties, neighbours, nearby residents and any other trespassers upon the Site will be prevented. The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.

(14) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

(15) Prevention of Construction Accidents at Site

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures).

(16) Emergency Response Plan

A description of the Emergency Response Plan including the action plan for rescue of casualties in an emergency such as a major accident or disaster occurrence, work discontinuation, notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.

(17) Accident Relief Plan

A description of the Accident Relief Plan including the procedure for first aid at the location and time of any accident and a description of appropriate medical facilities to be provided at the Site, including for example nurse, doctor, ambulance etc. all as stated in the Bidding Documents. The procedure shall also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(18) Facilities for Maintaining the Occupational Health Environment

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

(19) Work Discontinuation Criteria

A description of the proposed criteria for discontinuation of work and person responsible for issuing instructions for such discontinuation for example when danger is predicted for work due to strong wind, heavy rain, snow or other factors

(20) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings and 5S activities

(21) Legal Remedies and Requirements after Occupational Accidents

A description in brief of the legal requirements and remedies in the case of injuries and death at work and for personnel affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

C3. Clarifying the Bid Evaluation requirements by including evaluation of Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section III. Evaluation and Qualification Criteria, 1, Evaluation, 1.1 Evaluation of Technical Bids.

In the paragraph stating [Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI, Works Requirements.]

Insert "and Safety Plan" in the third line after the words, "work methods".

Insert the following additional sentence at the end of the above paragraph "Evaluation of the safety plan shall take account of the Health & Safety Officer and the Temporary Works Designer in 1.1.2 Personnel and of safety equipment from the Safety Plan in 1.1.3 Equipment." after the words "in Section VI, Works Requirements."

C4. Ensuring that reference in Bidding Documents is to "Health and Safety Officer", not the "accident prevention officer" and also adding Temporary Works Designer:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders Section III. Evaluation and Qualification Criteria against 1.1.2 Personnel,

Delete positions 2 and 3 as stated and insert as follows:

- 2 Health and Safety Officer at the Site
- 3 Temporary Works Designer (if this is a specified requirement or proposed by the Bidder - refer to JSSS, Chapter 1: General, Part C, Item C1)
- 4 Other personnel to be inserted as appropriate.

C5. Including Bidders Safety Declaration (BSD) in the Bid and Contract:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms

Include the attached “Form BSD - Bidders Safety Declaration” in the Bidding Documents after the existing Form-ACK, as new page BF-56; renumber existing pages BF-56 and BF-57 appropriately and insert suitable reference in the Table of Forms on page BF-1.

The Employer prefers that the Bidder has already appointed the Health and Safety Officer at the Site prior to Bid submission however if for any reason this appointment has not been made at Bid stage, this form can be signed by the Contractor’s Head Office Senior Health and Safety Manager.

Form BSD: Bidders Safety Declaration

I, [insert name and position of authorized signatory], being duly authorized by [insert name of Bidder/members of joint venture (“JV”)] (hereinafter referred to as the “Bidder”) to execute this Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans, hereby certify on behalf of the Bidder and myself that all information provided in the Bid submitted by the Bidder for [insert Loan No and name of the Project]

NK: We think the above sentence may be unnecessary.

Correct it is not

I, [insert name and position of authorised signatory], being duly authorized by [insert name of Bidder/members of joint venture (“JV”)] (hereinafter referred to as the “Bidder”) to execute this Form-BSD hereby declare our commitment to comply with the requirements of the JICA Standard Safety Specification (JSSS).

I further declare on behalf of the Bidder, that if selected to undertake **services (?) Works** in connection with the Contract, we will ensure that the Site is established and maintained as a healthy and safe workplace for the Employer’s Personnel and the Contractor’s Personnel and any other persons entitled to be thereon or that may be affected by operations thereby and that the Bidder is aware and accepts to follow all of the relevant health and safety Laws of the Country and the requirements of JSSS.

Irrespective of any Laws of the Country and the enforcement or otherwise of same, the Bidder hereby declares that he has given full and careful consideration, fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor’s Equipment, Personal Protective Equipment, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder further declares that all Works shall be carried out under the control of our qualified and expert health and safety management and where not available in the Country, we will import for sole use upon the Works:

1. New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for purpose and all to meet with the approval of the Engineer.
2. New or recent Contractor’s Equipment (not more than 5 years old unless otherwise pre-inspected and approved by the Engineer) all fit for purpose, in full working order, safe, clean, non-polluting, complete with all necessary spare parts and consumables and suitable for use on the Works, and

... that all of the above will be used for the purpose intended.

The Bidder further declares that he shall find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.

The Bidder further declares that he (and his subcontractors) shall:

1. Employ workers with appropriate skill, qualification and capability,
2. Fully inform workers about hazards,
3. Provide health and safety training to all Contractor’s Personnel and Employer’s Personnel **in** a language and vocabulary they can understand.
4. Keep accurate records of work-related injuries and illnesses.

5. Perform tests in the workplace, such as air sampling as required **by JSSS**.

Is this covered?

NK: In 2.1.5, measurement of dust, ventilation volume, temperature, carbon dioxide, oxygen concentration and hydrogen sulfide are specified.

6. Provide required new personal protective equipment at no cost to workers and ensure that this is used properly and kept in good condition,

7. Provide eyesight and hearing exams or other medical tests **required by JSSS**.

Ditto?

NK: Not specified. The Contractor shall medical check in accordance with the Law of the Country.

We should not rely on local Laws but should stipulate this under health requirements to make sure that the contractor checks this.

See earlier notes on this subject

This will be changed so that it also requires contractors to assign only workers who, in consideration of health, physical condition and age are suited to the operations.

8. Post injury and illness data where workers can see them.
9. Notify the Engineer and Employer and other statutory authorities within 8 hours of a workplace fatality or within 24 hours of any work-related accident, injury or illness.
10. Not retaliate against workers for using their rights under the Law of the Country.

The requirements and this declaration shall apply fully to all of the Bidder's subcontractors, suppliers and specialists for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if he is successful with his Bid, the Contractor's Health & Safety Officer at Site, named below and also included in Bidding Forms, Form PER -1: Proposed Personnel, unless otherwise stated in the Bidding Documents, shall be assigned from the Commencement Date, full time upon the Site of the Works and shall not be replaced or substituted at any time except with the express approval in writing of the Engineer.

If our Bid is accepted we agree that this Declaration together with all other documents comprised in our Bid Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidders Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site)

Name:

Date: _____

Company Stamp

*NK: Form Ack does not
request Company
Stamp, therefore not
necessary here, too.*

POA for HSO

C6. Defining procedures for submission and review of Method Statements and Safety Plans, not presently included in FIDIC:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause 4.1 Contractor's General Obligations</p>	<p><i>Delete that part of the fifth paragraph of this Sub-Clause which states:</i></p> <p>The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.”</p> <p><i>and in this place insert:</i></p> <p>(a) The Contractor shall, whenever required by the Engineer, submit Method Statements and Safety Plans each with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works or any part of the Works. The Contractor shall submit the requested information within seven (7) days of the date of the request.</p> <p><i>NK: 7 days seems too short comparing the 14 days mentioned in (b).</i></p> <p><i>The contractor should already have prepared this information in his plan so it is not considered to be extensive.</i></p> <p><i>As commented in 1.6.3, we would like to specify Particular Safety Plans for each work or section which describe actual safety measures at the site because we cannot expect the Safety Plans at Bid Stage and Commencement Stages describes in detail.</i></p> <p><i>We want the submission of Particular Safety Plan is the Contractor's obligation but not depending on the Engineer's request.</i></p> <p><i>Why different to FIDIC?</i></p> <p><i>Please refer to earlier notes and can we discuss</i></p> <p><i>The submission of Specific Safety Plan for not minor works but major/essential works shall be specified.</i></p> <p><i>Meaning?</i></p> <p>(b) The Engineer may review the Method Statements and/or Safety Plans and may give notice to the Contractor stating the extent to which the Method Statement and /or Safety Plan does not comply with the Contract. Within 14 days after receiving this notice the</p>
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	<p>Contractor shall rectify such non-compliance. If the Engineer gives no such notice within 21 days of the date of receipt of the Method Statement and/or Safety Plan, the Contractor shall proceed in accordance with the Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within 7 days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within 14 days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(d) The Contractor shall submit a revised Method Statement and/or Safety Plan whenever required by the Engineer or when any previous Method Statement and/or Safety Plan is inconsistent with actual conditions or requirements prevailing at the Site in accordance with the requirements described in items (a) to (c) above.</p>
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C7. Including JSSS as a part of the Contract with some further safety requirements:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause 4.8 Contractor’s Health and Safety Obligations</p>	<p><i>Delete this Sub-Clause completely and replace with the following:</i></p> <p>The Contractor shall:</p> <ul style="list-style-type: none"> (a) Comply with all applicable health and safety Laws of the Country, all standards and regulations, (b) Comply with all applicable health and safety obligations specified in the Contract including those contained in the JICA Standard Safety Specification (JSSS) and which as an entire document is to be read and construed as an integral part of the Contract by virtue of this contract clause amendment; (c) Comply with all directions issued by the Contractor's Health and Safety Officer (appointed under Sub-Clause 6.7 [<i>Health and Safety</i>] as amended by PC6.7; <p>NK: <i>The above (c) may not be necessary.</i></p> <p><i>Yes I believe it is and I think that it is already covered by FIDIC second edition</i></p>
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	<p>(d) Take care of the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed;</p> <p>(e) Keep the Site, the Works (and the other places (if any) where the Works are being executed) clear of unnecessary obstruction so as to avoid danger to these persons;</p> <p>(f) Provide fencing, lighting, safe access, guarding and watching of:</p> <p style="padding-left: 20px;">(i) the Works, until the Works are taken over under Clause 10 [<i>Employer's Taking Over</i>]; and</p> <p style="padding-left: 20px;">(ii) any part of the Works where the Contractor is executing outstanding works or remedying any defects during the Defects Notification Period; and</p> <p>(g) Provide any Temporary Works (including roadways, footways, guards and fences) that may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land and property.</p> <p>In addition to the reporting requirement of sub paragraph (g) of Sub Clause 4.21 [Progress Reports] the Contractor shall submit to the Engineer details of any accident as soon as practicable after its occurrence and, in the case of an accident causing serious injury or death, shall inform the Engineer immediately.</p> <p>The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of persons and any damage to any property.</p>
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C8. Modifying the safety reporting requirements of GC4.21:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause 4.21 Progress Reports</p>	<p>In addition to the safety reporting requirements of sub paragraph (g) of Sub Clause 4.21 [<i>Progress Reports</i>] the Contractor shall submit to the Engineer details of any accident as soon as practicable after its occurrence and, in the case of an accident causing serious injury or death, shall inform the Engineer immediately.</p> <p>The Contractor shall, comply with the health and safety recording and reporting requirements of JSSS.</p>
--	--

C9. Changing the accident prevention officer to the Health and Safety Officer:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 6.7 Health and Safety	In the second paragraph, delete the words “accident prevention officer at the Site” and insert “Health and Safety Officer at the Site ”
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C10. Including JSSS and the Bidder’s Declaration in the order of Priority of the Documents and ensure that it prevails over the Specification:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 1.5 Priority of Documents	<p>Delete sub-items (a) to (i) and insert the following sub-items (a) to (j):</p> <ul style="list-style-type: none"> (a) the Contract Agreement (if any), (b) the Letter of Acceptance, (c) the Letter of Tender, (d) the Particular Conditions - Part A, (e) the Particular Conditions - Part B, (f) these General Conditions, (g) the JICA Standard Safety Specification (JSSS) and the signed Bidder’s Declaration, (h) the Specification, (i) the Drawings, and (j) the Schedules and any other documents forming part of the Contract.
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Included to avoid the discrepancy that exists with the Contract Agreement where this is also referred to (see below).

C11. Including JSSS and the Bidder’s Declaration in the listing of documents included in the Contract Agreement:

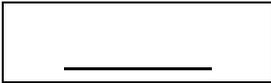
Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions. Section IX. Annex to the Particular Conditions - Contract Forms

<p><i>[Option A: One-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p>In paragraph 2. delete sub-items (i) to (ix) and insert the following sub-items (i) to (x):</p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Bid; (iii) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (iv) the Particular Conditions; (v) the General Conditions; (vi) the JICA Standard Safety Specification (JSSS) and signed Bidder’s Declaration;
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	<ul style="list-style-type: none"> (vii) the Specification; (viii) the Drawings; (ix) the completed Schedules; and (x) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
--	--

and:

<p><i>[Option B: Two-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p>In paragraph 2. delete sub-items (i) to (x) and insert the following sub-items (i) to (xi):</p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Technical Bid; (iii) the Letter of Price Bid; (iv) the addenda Nos [<i>insert addenda numbers, if any</i>] (if any); (v) the Particular Conditions; (vi) the General Conditions; (vii) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (viii) the Specification; (ix) the Drawings; (x) the completed Schedules; and (xi) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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Text highlighted in green: changes since last issue

Text highlighted in yellow: comments queries etc. from us (DCI) or from NK.

Text highlighted in red: requires our later coordinatio

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA



***Japan International Cooperation Agency
(JICA)***

_____, 2020

Prepared: DCI for NK

Issue: 3

Revision:

Date: 01/09/2019

NK please note that the following is a basic suggestion that requires your further study and legal review with appropriate revision/correction. The disclaimer is based in part on the FIDIC Documents

ACKNOWLEDGEMENTS

JICA have made reference to other publications during the preparation of this document and parts of such other publications may have been used in the preparation hereof. JICA acknowledges and gives credit to relevant sources and expresses its gratitude to such other sources and publications which include:

- 1) Japanese Acts, Orders and Ordinances including:

Industrial Safety and Health Act

Order for Enforcement of Industrial Safety and Health Act

Ordinance on Industrial Safety and Health

Safety Ordinance for Cranes

Ordinance on Safety and Health of Work under High Pressure ()*

Ordinance on Prevention of Anoxia, etc. ()*

Ordinance on Prevention of Hazards Due to Dust ()*

*Explosives Control Act (**)*

*Order for Enforcement of Explosives Control Act (**)*

*Ordinance on Explosives Control (**)*

()Translated but old, (**)No English translation, Others are available but not completely updated*

- 2) "OSHA Standard Part 1926 Safety and Health Regulations for Construction", as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A..
- 3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.

~~4) ICE temporary works design? And others (scaffolding?)~~

NK: we don't refer to ICE. We refer to BS (Code of Practice such as BS 5975.)

- 5) Conditions of Contract for Construction For Building And Engineering Works Designed By The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)

DCI - I think it better if this is included as FIDIC second edition has been used (copied) in Part C for GC4.8.

DCI: NK - Please confirm as above and insert further items as necessary to make this list comprehensive)

NK: we will do later.

DCI: Can we please discuss later; has the exact text of the above documents been used as this is this Acknowledgement? In English versions?

DISCLAIMER

JICA has prepared and issued this document in good faith for the reference of executing agencies, contractors and project teams engaged under the Japanese ODA programme, to encourage the attainment of a higher standard of health and safety management on its construction projects. JICA, (together with its consultants and other assistants engaged in the preparation hereof) will not accept or assume any liability or responsibility for any events or the consequences thereof deriving from the use of this document. The document is provided without any express or implied warranty, including without limitation, warranties of accuracy, completeness, fitness for purpose, in general or on particular projects and non-infringement. This document is intended to provide general reference and shall not be relied upon as a specific legal source or reference.

JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

DCI: Please note that all numbering is to be checked and all descriptions to be coordinated and changed in future.

If numbers are not used, explain why (e.g. Future issue etc.)

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1. General Requirements	Part A	Preamble Notes
	Part B	JICA Requirements
	Part C	Required Amendments to "JICA Standard Bidding Documents"
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	2.2	Protection of Third Parties from Danger around the site
	2.3	Dangerous and Hazardous Areas
	2.4	Spotters and Flagmen
	2.5	Fall Prevention/Protection
	2.6	Falling objection
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	2.9	Nil Maybe PPE
	2.10	Safety site management
		2.10.1 Information to Workers
		2.10.2 Appointment of Operation Leader Maybe transfer to Chapter 1
		2.10.3 Duty of the Operation Leader Ditto
		2.10.4 Life saving equipment for Works on Water
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		6.2.2 Other Cranes
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7. Temporary Works	7.1	General
	7.2	Earth retaining and support earthworks??
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	7.4	Scaffolding
	7.5	Walkway
	7.6	Work stages
	7.7	Temporary equipment
	7.8	Power facilities
	7.9	Welding works
8. Earth Works	8.1	General
	8.2	Manpower excavation
	8.3	Machine excavation
	8.4	Embankment
	8.5	Blasting
9. Foundation works	9.1	General
Why separate? Covered by 8 and 10 surely unless only Piling NK: Earth works and piling works are different, so they are separated. MD Review later	9.2	Precast piling — in situ??, bored??
	9.3	Machine excavation foundation In-situ piling
	9.4	Open caisson and deep well foundation Earthworks?
		Basements and waterproofing
10. Concrete Works	10.1	Reinforcement Reinforcing bars works
	10.2	Formwork
	10.3	Concrete works in-situ/precast/prestressed?? Not yet determined by JICA to include precast/prestressed
11. River Works Diving works (Title will be reconsidered later.)	11.1	Diving works NK: Most dangerous works only will be specified.
		Coffer dams?? The 1 st stage JSSS will not specify other than diving works.

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS)
CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

PART A: PREAMBLE NOTES

A1. Purpose and Objective:

The Japan International Cooperation Agency (hereinafter referred to as “JICA”) require that all parties engaged upon their ODA Projects shall endeavour to establish and maintain a culture and environment where health and safety is of the highest priority. The common goal shall be to achieve a zero accident rate, adopting the slogan of “Safety First”.

To assist with this objective, JICA have prepared and published this Standard Safety Specification (hereinafter referred to as “JSSS”), which they aim to be adopted for future selected Projects by the Executing Agency and their consultants for such Projects.

A2. Effectiveness

JSSS has been published on-line by JICA and it shall become effective and be incorporated by Project executing agencies in the Bidding Documents (and therefore the Contracts) for particular Projects on the date that the Loan Agreement (LA) for that Project has been executed and where the parties to such LA have formally agreed to adopt JSSS as the technical basis for Health and Safety management on that Project.

It is not intended to include or attach a hard copy of JSSS to Bidding Documents or the Contract for respective Projects but a copy of JSSS shall be available on the JICA’s web site shown below:

[http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/_____](http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/)

A3. Incorporation of JSSS into Contracts

JICA require that the Employer, Engineer and Contractor will each print a hard copy of JSSS for their own reference and use and that all of these entities shall fully inform their personnel, Subcontractor’s, sub-consultants, other all parties who are associated with the particular Project of the existence, content and purpose of JSSS and the objectives thereof.

Reference to JSSS and incorporation of the required amendments into the Bidding Documents for any Project and reference to JSSS on the website will be sufficient to deem incorporation of JSSS into the Contract for that Project.

Unless otherwise agreed by JICA and the executing agency of currently on-going JICA funded Projects and between the Employer and Contractor(s) on those Projects, this JICA Standard Safety Specification shall not be applied to such Projects.

Further updates and revisions to JSSS unless otherwise agreed with the Employer will be applied to new Projects from the date that such updates and revisions are published on line.

Such further updates and revisions shall not be applied to on-going JICA funded Projects unless otherwise instructed by the Engineer through the issue of an appropriate Variation under GC13.1.

Variation effect to be considered

In order that JSSS shall become an integral part of the Bidding Documents for particular Projects and so that the requirements can therefore be implemented immediately after online publication of this document, the particular instructions for alteration of the Bidding Documents by Project employers and consultants are contained within this document in Part C of this Chapter 1: General Requirements. After making such modification to Bidding Documents for particular Projects, JSSS the JICA Standard Safety Document shall be read and construed as a part of the Bid and therefore the Contract for that Project.

It is the ultimate intention of JICA to formally update the separate “Standard Bidding

Documents under Japanese ODA Loans” by incorporating the same instructions however in the meantime relevant changes shall be made in accordance with this Standard Safety Specification.

A4. Compliance and General Obligations

JSSS shall not ~~alter or~~ limit a contracting party’s statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of Contracts.

Compliance with the JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.

Contractors shall ensure that all health and safety hazards and risks are properly identified, assessed, controlled and evaluated prior to commencement of any work. Only ~~suitably qualified, fit and applicable~~ ~~competent~~ persons may perform the ~~construction~~ ~~specified~~ activities.

Where the Laws of the Country so state, the Health and Safety Officer (as defined herein) shall be qualified and legally registered as such in accordance with such Laws.

Similarly JSSS shall not limit ~~or restrict~~ the Contractor to the scope contained herein.

All Parts (A, B and C) of this Chapter 1: General Requirements are to be read and construed collectively as integral parts of JSSS and therefore constitute integral parts of the Contract for the Project.

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

PART B: JICA REQUIREMENTS

1.1 Employer's Safety Declaration

By entering into a Contract, the Employer (together with the Engineer acting as his consultant) declares that he shall collaborate in good faith with the Contractor and take all reasonable measures within his authority and under his control to promote the highest achievable health and safety standards in the execution of the Works all in accordance with his contractual and statutory responsibilities and adopting the slogan:

“SAFETY FIRST”

The Contractor shall aim to achieve “Zero Accident” in the execution of the Works taking full responsibility for the health and safety management of the Works, adopting JSSS that specifies the minimum safety requirements that the Contractor shall implement.

A Bidder's Safety Declaration has been prepared and is included in Part C of this Chapter 1: General Requirements.

1.2 Definitions, Abbreviations and Standards

1.2.1 The following words and expressions in JSSS relating to the Conditions of Contract and the content of this Chapter 1 shall have the definitions stated:

- (1) **“Executing Agency”** means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and defined in the Contract as the Employer.
- (2) **“GC”** and **“PC”** followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) **“Health and Safety Officer”** or **“HSO”** means the Contractor's health and safety officer at Site to be appointed by the Contractor in accordance with PC6. 7 [*Health and Safety*] and named by the Bidder in his Bid.
- (4) **“JSSS”** or **“JICA Standard Safety Specification”** means the document of this title published officially by JICA on their website, issue number __ dated ____ and as may be modified in part or in whole by the Bidding Documents for the Project.
- (5) **“Method Statement”** means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in PC4.1 [*Contractor's General Obligations*].
- (6) **“OSHA”** means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A..

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

Unless otherwise evident from the text, reference in OSHA to “team leader”, “on-site supervisor”, “On-site supervision”, “Field superintendent”, “work chief” and the like shall be collectively construed as reference to “the Contractor's Representative” and reference to the “safety and health manager of the Contractor” and the like shall be collectively construed as reference to the Contractor's “Health and Safety Officer”. “The construction plan and safety and health plan”, shall be construed according to the

terms for such similar documents required by the Contract.

If any ambiguity or discrepancy is found in the OSHA documents specified in JSSS, or if any difference or discrepancy is found between OSHA documents and JSSS, the Engineer shall issue any necessary clarification or instruction.

(7) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the agreement with JICA and utilising the funds provided by JICA under the terms mutually agreed for that purpose.

(8) “**Safety Plan**” means a document that contains the overall risk assessments and shows the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works throughout the execution of the Works or any Section or part of the Works, as referred to in PC4.1 [*Contractor’s General Obligations*].

“**Safety Plan**” shall also mean the “occupational health and safety plan”, “health and safety plan” and “safety plan” all described as such in JSSS and other documents contained in the Contract. *This may not be necessary if references are consistent.* The phrase “health and safety” shall be construed as covering “occupational health and safety”.

1.2.2 The following technical words and terms in JSSS shall have the definitions stated:

DCI: This is subject to further development and might ultimately be transferred to a separate Annex

(1) “**Confined Spaces**” shall mean spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.

(2) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.

(3) “**Formwork**” means temporary containment structures for in-situ concrete and its immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.

(4) “**Hazardous Areas**” means areas defined in Section 2.3 as such.

(5) “**Operation Leader**” (also known as a “Ganger”, “Leading Hand”, “Foreman” or “Working Foreman” and the like) means a member of the Contractor’s workforce who through experience, internal training and testing is deemed by the Contractor to be qualified to work with and lead the worker’s teams, to direct them in the performance of their assigned duties and ensure their compliance with the Contractor’s safety regulations.

who is certified as capable of directing safely the works specified in Annex 4 finishing the skill training course specified in 1.9 (1)(c) of this Specification

(6) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level. PPE for PFAS shall comprise of a body harness, an anchorage, connectors and typically shall include a lanyard, deceleration device, lifeline, or suitable combination of these. The use of a Safety Belt for fall arrest systems is prohibited. Wherever PFAS is provided for use, the Contractor shall ensure that it is used.

(7) “**Personal Fall Restraint System**” or “**PFRS**” means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge

of any working area and therefore eliminating the risk of a fall. PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices. Wherever PFRS is provided for use, the Contractor shall ensure that it is used.

DCI: Above PFRS is recommended but so far not included in JSSS

- (8) “**Safety Belt**” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard, lifeline or deceleration device. Any safety belt that has actually been subjected to a fall or previous in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for the safety of any worker.

DCI: there is much more to add to this list so it is complete and the order of above and new items will be rearranged in alphabetical order. I will add to this successively as we receive and edit later sections and draft appropriate definitions.

1.2.3 The following Sub-Clauses relate generally to the above definitions and to those already contained in the Contract:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) Any reference to “Contractor” within this document shall also be deemed to include “all Subcontractors”, for whom the Contractor shall remain fully responsible.
- (3) Unless otherwise evident from the text, any reference to the Contractor’s responsibilities for “Safety” in this documents shall also be construed as reference to “Health and Safety”.
- (4) Any reference in JSSS requiring the provision by the Contractor of safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of such safety measures for Employer’s Personnel and any other persons that are entitled to be on the Site and other places (if any) where the Works are being executed.
- (5) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction For Building and Engineering Works Designed by the Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

1.2.4 The following abbreviations of technical terms shall have the meanings stated:

DCI: This is subject to further development and may ultimately be transferred to a separate Annex

PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings

1.2.5 The following abbreviations of standards, codes and the like shall have the meanings stated:

DCI: This is subject to further development and may ultimately be transferred to a separate Annex

ANSI	American National Standards Institute.
ASTM	American Society for Testing and Materials.
BS	British Standard.
BSEN	British Standard European Norm.

- ISO International Organization for Standardisation.
JIS Japanese Industrial Standards.

1.3 Application to Grant Aid and other Projects

1.3.1. JSSS has been drafted to apply to JICA ODA Loan Projects and to the relevant FIDIC harmonised form of Contract for such Projects as referred to in 1.2.3 (4) above.

1.3.2. JSSS shall also apply to other JICA assisted Projects that have been awarded under different forms of contract including those under Contractor design contracts and contracts under the JICA Grant Aid programme. When so used, suitable modification shall be required to the definitions and text of JSSS and the Bidding Documents for those Projects to ensure compatibility and consistency with the relevant contract requirements for the Project, reflecting the same intentions, standards and procedures for improving health and safety.

1.4 Laws and Reference Standards The Contractor shall comply as a minimum with the Laws of the Country, including all health and safety standards.

1.4.2 If the Employer has formally agreed with JICA to adopt JSSS for the Project, then the technical requirements of JSSS shall apply as a minimum and these shall prevail over the technical requirements of Laws of the Country without altering or limiting the Contractor's legal duties and obligations under such Laws.

1.4.3 Otherwise where the Laws of the Country (including any health and safety standards) are silent on particular health and safety requirements and where provisions are included in JSSS then JSSS shall apply and prevail.

1.4.4 JSSS is an abbreviated document and therefore as a general rule, where JSSS contains insufficient or no technical regulations or no detailed requirements then the related technical regulations of OSHA shall apply.

~~1.4.5 If any ambiguity or discrepancy is found in JSSS, the Engineer shall issue any necessary clarification or instruction.~~

1.4.6 JSSS prescribes minimum requirements and the parties are free to include higher standards when so agreed between Contractor, Employer and Engineer.

1.4.7 The Contractor shall be deemed to have studied and familiarised himself with the Laws of the Country and to have ascertained if any part of such Laws are superior to any of the particular requirements of OSHA, in which case such particular Laws shall apply and the Contractor shall inform the Engineer accordingly.

1.4.8 The reference standards used in JSSS can be substituted with alternative standards after requesting and obtaining the consent of the Engineer who may give such consent only if in his opinion such alternative standards provide an equivalent or higher standard of health and safety than that required by JSSS.

~~1.4.9 Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used shall be that applicable at the Base Date.~~

1.4.10 Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.5 Contractor's Safety Certification

DCI: *NK: Please confirm if this certification is required and if so is it to be a Bid Qualification requirement (we do recommend that it is). Refer to Part C where I have made this optional*

- 1.5.1. Unless otherwise expressly stated in the Bidding Documents (refer to Chapter 1: General Requirements, Part C, Clause C2. (5)), the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation as determined by the Employer (if to be determined at Bid Evaluation stage) or Engineer (during the implementation stage).
- 1.5.2. If accreditation is required by the Bidding Documents an original or authorised true copy of the current certification shall be submitted with the Bid and this shall subsequently be included with the Contract.
- 1.5.3. The Contractor shall submit original or authorised true copies of all current updates to the Engineer when due.

1.6 Safety Plans

- 1.6.1 The Contractor shall be required to submit the an overall Safety Plan at two stages:
- (1) Safety Plan at Bid Stage.
 - (2) Safety Plan at Commencement Stage.

In addition the Contractor shall provide such further overall or updated or particular Safety Plans as may be necessary due to current circumstances or conditions at the Site or as requested by the Engineer in accordance with GC 4/1 [Contractor's General Obligations], as amended by this Chapter 1: General Requirements, Part C, Clause C6.

- 1.6.2 For details of the Safety Plan at Bid Stage, refer to JSSS Chapter 1: General Requirements, Part C, Clause C2 Detail of Safety Plans in Bidding Documents.
- 1.6.3 For details of the Safety Plan at Commencement Stage, refer to JSSS Chapter 1: General Requirements, Part C, Clause C7 PC4.8.

NK: We think this clause shall be put in the PC 4.8.

MD – I have moved this to the PC clause but please be aware of copyright.

1.6.4 Particular Safety Plans

DCI: I recommend that automatic submission of "Particular Safety Plans" is not necessary and has no meaning when the following is considered in conjunction with revised Sub-Clause 4.8 (see Part C, Clause C.7)

- (1) The Safety Plan (or parts of it) shall be revised or supplemented where considered necessary by the HSO or when required by at the reasonable request of the Engineer in accordance with GC 4.1 [Contractor's General Obligations], as amended by this Chapter 1: General Requirements, Part C, Clause C6. Each such revision or update of the Safety Plan for particular parts of the Works as above or may be required by the Engineer and hereinafter referred to as a Particular Safety Plan, shall be submitted promptly to the Engineer in any event not less than 21 days before commencing those parts of the Works for which the Engineer has requested a safety plan, such that the Engineer is made aware in writing of at least the following information for all each parts of the Work:
 - (a) Work outline, work procedure and order of carrying out the work.
 - (b) Number of Contractor's Personnel
 - (c) Safety management system and responsibility and authority of Contractor's Personnel.

- (d) Risk assessment.
- (e) Safety measures.
- (f) PPE for the Contractor's Personnel.
- (g) Safety education and training of the Contractor's Personnel and TBM.
- (h) Teaching materials used in education, training and pre-operation TBM before work.
- (i) Method of information sharing and communication among the Contractor's Personnel.
- (j) Implementation and monitoring of measures for health and safety management.
- (k) Emergency response.
- (l) Accident relief.

~~1.6.5 If items other than the above are necessary due to the nature of work, these items shall be included. contents of this Specification shall be supplemented by referring to the provisions of the work concerned.~~

DCI: Above is already "at least" so suggest this can be deleted but is there another meaning I do not understand

1.6.6 The Contractor shall also consider the opinions of the Contractor's Personnel in preparing all Safety Plans or updated Safety Plans.

DCI: Not the main plan it is too early, updates yes

1.6.7 In performing risk assessments the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.

1.6.8 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed of all hazards and risks on the Site.

1.6.9 The procedural flow of risk assessment shall be as follows.

- (1) Identifying hazards.
- (2) Evaluating risks.
- (3) Determining measures of risk reduction.

1.6.10 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:

- (1) Removal of hazards such as eliminating dangerous works.
- (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
- (3) Design/Engineering measures.
- (4) Management measures.
- (5) Use of PPE.

DCI: NK Please clarify and discuss (3) and (4) within the context of engineer's design.

1.7 Contractor's Health and Safety Management Staff

DCI: Health staff?

1.7.1 Requirements for the HSO:

- (1) JICA require the Bidder to name the HSO in the Bid (and thence Contract) and the Contractor shall assign that named HSO upon the Works, prior to the Commencement Date.
- (2) If the HSO has not been named in the Bid or Contract, the Contractor shall, prior to the Commencement Date, submit to the Engineer for consent, the name and particulars of the person the Contractor proposes to appoint as the HSO.
- (3) If the appointed person fails to act as HSO and is removed from the Site of the Works under the of GC6.9 [*Contractor's Personnel*], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of another suitable replacement person to the Engineer for his consent.
- (4) The HSO shall be an employee of the Contractor and not of a Subcontractor or consultant and unless otherwise stated in the Contract shall be assigned full time upon the Works and his/her responsibilities, authority and duties shall be in accordance with PC6.7 [*Health and Safety*].

DCI: MD to consider coordination of the above and following with Form BSD

- ~~Prior to the Commencement Date and in advance of the appointment of the HSO at Site, the Contractor's senior head office health and safety officer HSO may be assigned in this capacity until the HSO is appointed as above.~~
- (5) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
 - (6) The HSO shall possess ~~an appropriate~~ qualification for such position if required by the Laws of the Country and also (if so required) shall be licensed or registered in the Country and perform such duties as are legally mandated.
 - (7) The HSO shall be fluent in the language for communications stated in the Contract as defined in GC1.4 [*Law and Language*]. The HSO shall preferably also be fluent in the ruling language of the Contract (if different) however it is acceptable for the HSO to use a translator for this language only.
 - (8) Where there is no legal requirement under the Laws of the Country for qualification, the HSO, shall have appropriate academic and health and safety qualification, work experience in construction (minimum 10 years) and in health and safety management (~~minimum 5 years~~ which can be concurrent with construction experience) and whom the Contractor considers is qualified to perform the duties subject to receiving the consent of the Engineer.
 - (9) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his/her duties.
 - (10) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for HSO including additional managers, assistants and inspectors all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.
 - (11) The HSO (where necessary with the assistance of his qualified support staff) shall personally be capable of ensuring that:
 - (a) All working areas of the Site are inspected on a regular basis (at least once every working day) to detect if any unsafe practices or conditions exist.

- (b) If such unsafe actions, practices or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this not possible then **to temporarily stop all construction activity on** ~~suspend~~ that part of the Works until such action has been taken.

Such inspections attended by the HSO, may also include the attendance of the safety representative of the Engineer.

1.8 Health and Safety Officer – Scope of Duties

1.8.1 The HSO shall devote his/her full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.8.2 The particular scope of duties of the HSO shall cover (but shall not be limited to) the following:

(1) Health and Safety Management Work:

(a) Preparation of Safety Plans, implementation, evaluation, improvement, revision and submission thereof.

(b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel ~~and Employer's Personnel~~.

(c) Provision of **activity records** in progress reports.

DCI: NK please clarify the meaning of the above?

(d) Constant inspection and implementation of corrective measures for any unsafe conditions at the Site and any unsafe behaviour or practices of the Contractor's Personnel ~~and Employer's Personnel~~.

(e) Consultation on safety management with the Employer's Personnel, ~~and the Engineer~~.

(f) Temporarily stop all construction activity on any parts of the Works in case of accident or the like and informing the Engineer.

(g) Responding to accidents, creating and implementing measures to prevent reoccurrence.

(h) Reporting and consulting with the Engineer including when an accident occurs or a hazardous situation is likely.

(i) Appointment of health and safety inspectors and assistants **after obtaining the consent of the Engineer**.

(2) Instructing the Contractor's Personnel ~~and Employer's Personnel~~ to take improvement measures for maintaining health and safety and preventing accidents.

(3) Checking the health status of the Contractor's Personnel.

(4) Planning and implementation of various training and education implementation plans.

(5) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including **fatalities**, lost time records and near-miss cases.

(6) Preparing regular internal and external reports on health and safety activities.

(7) Hazard prediction activity

DCI: NK for Kiken Yochi: see later clause 1.13.

1.9 Contractor's Health and Safety Committee

1.9.1 The Contractor shall create an internal Safety Committee for the purpose of effective health and safety management.

1.9.2 Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors representatives, health and safety personnel, site staff.
- (7) Representative of Contractor's Personnel including workers on Site.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.9.3 The HSO shall be the chairman of the Safety Committee.

1.9.4 The Contractor shall hold a regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Monthly or weekly schedule of important health and safety matters.
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence.
 - (d) Hazards, safety and health problems resulting from:
 - (i) Site inspections by HSO.
 - (ii) Issues raised by the representative of Contractor's Personnel. workers on Site.
 - (iii) Issues raised by Subcontractors.
 - (iv) Issues raised by others.
 - (e) Feedback on the regular safety, coordination and other meetings with the Engineer.
 - (f) Safety instructions received from the Engineer.
 - (g) Items to be coordinated with police, fire department and other related organisations.
 - (h) Compliance and registration matters under the Laws of the Country.
 - (i) Safety and health awards, media attention and the like.
 - (j) Other matters.

1.9.5 Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.10 Engineer's Regular Safety Meetings

1.10.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to make commitments on health and safety matters on behalf of the organisations that they represent:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Monthly or weekly schedule of important health and safety matters
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence.
 - (d) Hazards, safety and health problems resulting from:
 - (i) Inspections by the Engineer and the Employer.
 - (ii) Site inspections by HSO.
 - (iii) Issues raised by the representative of Contractor's Personnel workers on Site.
 - (iv) Issues raised by Subcontractors.
 - (v) Issues raised by others.
 - (e) Status of resolution of previous problems.
 - (f) Items to be coordinated with police, fire department and other related organisations.
 - (g) Compliance and registration matters under the Laws of the Country.
 - (h) Safety and health awards, media attention and the like.
 - (i) Other matters.

1.10.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer with a further copy provided directly to JICA.

DCI: Please note above suggestion

1.11 Project Safety Committee

1.11.1 On larger Projects with multiple contract packages and contractors, if stated in the Bidding Documents for those Projects, the Employer or Engineer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.11.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.

- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.11.3 The Chairman of the Safety Committee shall be the Employer.

1.11.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.

1.11.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

1.12 Health and Safety Coordination with Other Contractors

1.12.1 Refer to GC2.3 and GC4.6 regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer, and
- (3) the personnel of any legally constituted public authorities,

... who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to (1) and (2) above, the Employer shall ensure that such personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC4.8 [*Safety Procedures*] and GC4.18 [*Protection of the Environment*].

In relation to (3) above the Contractor shall ensure that such personnel are fully informed of the Contractor's Safety Plan and shall liaise and agree with such authorities to ensure that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Contractor is therefore required to contact such other contractors directly and liaise with them to obtain all such other information and incorporate this into the Safety Plan.

When risks arise because of potential interactions between the Contractor and other contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Contractor shall take a positive role in ensuring the general principles of risk prevention and control are applied amongst all contractors involved.

1.12.2 The Bidding Documents shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of the such works and the location, timing and other conditions for such works.

1.12.3 If the above circumstances apply, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the

works of any legally constituted public authorities.

- (c) Accidents, injuries and measures to prevent any reoccurrence.
- (d) Status of resolution of previous problems.
- (e) Items to be coordinated with police, fire department and other related organisations.
- (f) Compliance and registration matters under the Laws of the Country.
- (g) Safety and health awards, media attention and the like.
- (h) Other matters.

1.12.4 Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven days after the meeting.
- (3) A further copy shall be included in the Engineer's monthly progress report.

1.13 Contractor's Health and Safety Management Activities

1.13.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.13.2 Health and safety management activities shall include (but are not limited to):

- (1) Overall Management Activities:
 - (a) Tasks of the Health and Safety Officer as described above.
 - (b) Arranging, chairing, attending meetings as described above and other internal contractor meetings including TBM.
 - (c) Attending pre-work meetings, pre-start meetings, schedule meetings.
 - (d) Monitoring the implementation of the Safety Plan.
- (2) Management of Contractor's Personnel:
 - (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, toolbox meetings, providing general advice and instruction, specific instructions on individual works, safety confirmations, information to be conveyed etc.

(b) Instruction and management of traditional Japanese cleanliness safety campaign known in Japan as 5S ACTIVITIES where:

Seiri = sorting

Seiton = tidying

Seiso = cleaning

Seiketu = cleanliness

Shituke = discipline

(c) KIKEN YOCHI TRAINING (KYT) for hazard prediction training usually in TBM, where:

K = kiken (hazard)

Y = yochi (prediction)

T = training

- (d) Instruction and management of safety education and training.
- (e) Instruction and management of various safety measures.

1.14 Monitoring

1.14.1 The Contractor shall develop and implement systems to ensure that compliance with the Safety Plan is monitored efficiently and transparently at all times, for which purpose the Contractor shall:

- (1) Create checklists for monitoring.
- (2) Carry out regular and irregular inspections. monitoring of implementation status
- (3) Monitor failed, unsafe or non-compliant conditions.
- (4) Create files and safe storage systems for the monitoring records.
- (5) Copy all relevant information to the Engineer as requested by the Engineer.

1.15 Joint Site Safety Inspections

1.15.1 In addition to the Contractor's own daily Site Safety Inspections described above, the Contractor shall also conduct regular Joint Site Safety Inspections with the Engineer or (if appointed) the safety representative of the Engineer. Respective safety staff may also attend.

1.15.2 Frequency of Joint Site Safety Inspections shall be at least once a week.

1.15.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.

1.15.4 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.16 Engineer's Safety Representative

DCI: (NK what is the future intention? Will a safety engineer be appointed in future on all Projects or will the Engineer act in this capacity? This may require revision of the Guidelines for the Employment of Consultants under Japanese ODA Loans.

This requires further discussion with JICA.

It may require a more detailed procedure, the following is an outline suggestion only This requires further coordination and development with other sections (e.g. scaffolding) so that joint safety and certification and "safe for use" procedures can be implemented if required) without affecting the Contractor's overriding responsibility.

Please refer to Part C where I have made further reference.

I understood that JICA wanted the Engineer to somehow play a more proactive role so would like to discuss this with you to ascertain the future intentions.

1.16.1 On large Projects, the Engineer may appoint an assistant under GC3.2 to be known as the Engineer's Safety Representative (ESR) and who shall be responsible for health and safety within the Engineer's organisation on Site and for monitoring the Contractor's compliance with the each contractor's Safety Plan.

1.16.2 By written notice served under GC3.2, the Engineer shall delegate authority to the Engineer's Safety Representative to represent the Engineer in matters of health and safety at Site, to issue written instructions to the Contractor on matters of health and safety and monitor compliance with such instructions which shall include:

- (1) Instructions requiring the Contractor's compliance with the Safety Plan.

- (2) Emergency instructions to Contractor to stop working where the Engineer observes accidents, near misses or unhealthy or unsafe conditions.
 - (3) Instructions requiring the Contractor to change the working methods at the Site to improve health and safety.
- 1.16.3 The Engineer's Safety Representative shall cooperate and work closely with the HSO and will represent the Engineer on Joint Site Safety Inspections and also undertake independent and regular inspections of the Works at the Site.
- 1.16.4 The Engineer's Safety Representative shall give safety compliance instructions to the Contractor in accordance with his/her delegated authority under GC3.3.
- 1.16.5 The Contractor shall take corrective action within the time limit prescribed in the instruction, shall keep the Engineer's Safety Representative fully informed on progress and shall report in writing when the corrective action is completed.
- 1.16.6 If the Bidding Documents state that the appointment of a full-time or part-time Engineer's Safety Representative is not required (refer to JSSS Chapter 1: General Requirements, Part C), it is to be assumed that the Engineer shall act in this capacity.

DCI: Communications require more thought and definition. Who is to issue and receive? Can be direct HSO and ESR?

NK: The ESR may be assigned as Full-time or concurrent safety supervisor. The Employer always hesitate to assign foreign safety expert because of cost. For enforcing JSSS, it needs experienced and competent safety engineer.

DCI: Can we please discuss further so I can understand what you want to do.

NK: All correspondence shall be made between the Contractor and the Engineer, not HSO and ESR as usual.

DCI: There may be a requirement for direct (urgent) communication on some safety issues.

1.17 Safety Statistics

- 1.17.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.
- 1.17.2 Actual statistics shall include the following:
- (1) Accident: description, casualties, location, time, type and cause.
 - (2) Near-miss: description, casualties, location, time, type and cause.
 - (3) Lost-time: lost hours of casualties, duration of discontinuation.
 - (4) Remedial measures taken.
 - (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
 - (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes of them.
 - (7) Record of reports as may be required by government authorities, labour standards office.
 - (8) Number of health and safety staff, contents, frequency, participant, duration of safety education at site and safety event.
 - (9) Others.

- 1.17.3 All data shall be in a format and content to be approved by the Engineer.
- 1.17.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the safety representative of the Engineer for validation and mutual agreement.
- 1.17.5 The data shall subsequently be compiled and included in the Monthly progress report.

1.18 Safety Reports

- 1.18.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:
- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, improvement.
 - (2) Joint Site Safety Inspections.
 - (3) Weekly Safety Report: summary of safety matters of the week.
 - (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report can be submitted as an attachment to the Contractor's monthly progress report.

1.19 Health and Safety Records

1.19.1. The Contractor shall keep the health and safety records for the following:

- (1) Accidents, fatalities, near-misses, occupational accidents.
- (2) Meetings for safety and health management.
- (3) Monitoring of safety and health management activities.
- (4) Health and safety education and training for the Contractor's Personnel.
- (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.

1.17.6 All records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer.

1.20 Proper Placement of Contractor's Personnel

1.20.1 Further to compliance with GC6.9, the Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.

The HSO shall countersign all such records to indicate his/her confirmation of the suitability of each member of the Contractor's Personnel prior to their placement.

These records shall be made available for inspection by the Engineer.

1.20.2 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor in consideration of:

- (1) Work content and work environment.
- (2) Work experience, qualification and capability.
- (3) Health condition upon commencement of employment.
- (4) Health condition on a regular basis before daily work starts.
- (5) Allocation of an achievable and safe work volume.
- (6) Allocation to workers under 18 in accordance with GC6.21.

1.21 Placement and ID of Personnel for Works Requiring a License

- 1.21.1 If for any of the operations at Site, the Laws of the Country require operating, supervising or any other Contractor's Personnel to have a licence, particular qualification, registration or certification the Contractor shall ascertain that all such Contractor's Personnel possess and maintain such documentation.
- 1.21.2 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and shall independently test all personnel to ascertain that they do possess sufficient knowledge, qualification and skills.
- 1.21.3 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry an ID passes with name, photograph, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that he resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site unless otherwise approved by the Engineer and assigning a suitable replacement.

1.22 Health and Safety Education and Training

- 1.22.1 The Contractor shall conduct health and safety education and training for all of the Contractor's Personnel.
- 1.22.2 The Contractor shall include in the Safety Plan the outline of the education and training plans (participants, time, teaching materials, policy of selecting educators and trainers). In addition, the Contractor shall submit full details of such education and training to the Engineer for his information before the start of such education and training.
- 1.22.3 Education and training shall be provided free-of-charge to the trainees, conducted during normal working hours, trainees shall be paid and the Contractor shall bear all necessary expenses.
- 1.22.4 Safety induction: For general education and training of new entrants upon the Site and those who are scheduled to change work type, skill or location, the following subjects shall be included:
- (1) Chain of command and means of communication methods for the work.
 - (2) Hazards or dangers due to the use of machinery, equipment, raw materials, etc., and methods of dealing with such hazards or dangers.
 - (3) Performance and handling methods of safety devices and personal protective equipment PPE with practical on-Site demonstration.
 - (4) Hazardous substance control devices with practical on-Site demonstration.

DCI: - to be coordinated later

- (5) Working procedures generally.
- (6) Inspection before starting any work.
- (7) Maintaining an orderly, tidy and clean Site.
- (8) Emergency measures and evacuation at the time of accidents, etc.
- (9) Health and safety rules.
- (10) Causes and prevention of diseases that may occur in relation to the work concerned.
- (11) Other matters necessary for health or safety related to the work concerned.

1.22.5 For education and training of Contractor's Personnel who are planned to be assigned to dangerous or harmful work (for example as listed in Annex 2), such Contractor's Personnel shall be given the same general education and training as above plus further special education and training pursuant to the work in which such Contractor's Personnel are to be engaged.

NK: Dangerous and harmful works here can be limited to those in Annex 2, not such dangerous works with hand tools.

The intention of this clause is to clarify works that needs special knowledge and skill, which are specified in Japan.

DCI: Can we please discuss further as whilst I understand that there are specified training requirements in Japan these are different outside Japan.

Please also refer to our comments on Annex 2

The Contractor shall determine the educational subjects and teaching hours for the special education and training with reference to Annex 3.

Special education for the work concerned may be omitted in full or in part for any Contractor's Personnel who the Contractor has ascertained, holds valid qualification issued by an acknowledged public organisation of the Country and who has finished comprehensive training by the public organisation of the Country or acceptable training in another country and whom the Contractor ascertains as having equivalent and sufficient knowledge and skills for all or part of items of the special education.

1.22.6 For education and training of Contractor's Personnel who are to be appointed as Operation Leaders as co-workers (NK requires discussion – Chargehand, trades foreman, gänge etc) with each team of workers engaged upon such work at the Site (for example as listed in Annex 4 and 5), such personnel shall be given the same general education and training as above plus further special education and training pursuant to the work in which such personnel are to be engaged.

The Contractor shall determine the educational subjects and teaching hours for the skill-training course with reference to Annex 5.

Special education for the work concerned may be omitted in full or in part for any Contractor's Personnel who the Contractor has ascertained, holds valid qualification issued by an acknowledged public organisation of the Country and who has finished comprehensive training by the public organisation of the Country or acceptable training in another country and whom the Contractor ascertains as having equivalent and sufficient knowledge and skills for all or part of items of the special education.

DCI: NK – This requires further clarification and discussion

1.22.7 Education and training personnel

Educators and trainers lecturers can be Contractor's Personnel who are experienced, academically qualified and (if legally required) registered as teacher or lecturer educators and trainers under the Laws of the Country, fluent in the language of the Country or external educators and trainers similarly qualified, registered and fluent.

In case of absence of availability of such suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary qualification, ability and experience, subject to the receiving the advance consent of the Engineer.

1.22.8 Records of education and training

The Contractor shall create and store records of trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for inspection by the Engineer.

1.22.9 Explanation of health and safety rules to persons other than the Contractor's Personnel

The Contractor shall provide general health and safety education courses to the Employer's Personnel and to any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed

1.23 Emergency Response Plan

1.23.1 The Contractor shall prepare an Emergency Response Plan as a part of the Health and Safety Plan in order to promptly and appropriately respond to natural disasters, fires, and other emergencies that may occur during construction.

DCI: *NK please note:*

Natural disasters include typhoons, earthquakes etc. which are actually GC19 Force Majeure situations for which, the contractor is not responsible and he has no obligation to give any such automatic "response".

What is the actual required extent of the Contractor's "response"? What manpower and equipment is he to provide? How can this be predicted and estimated?

What about the Employer's and Engineer's own plans and what about the availability of the rescue services etc. in the Country?

These arrangements appear to be onerous upon the Contractor and of not properly worded may cause difficulty with interpretation of force majeure.

Can we please discuss and consider this further to understand the purpose and intention.

We have edited the following to make it readable but do not agree with the content.

NK: *We specified for the natural disasters which is not GC19 Force Majeure situations. We expect the Contractor to prepare the natural disaster which may be occurred by the weather or earthquake of magnitude between bad weather and earthquake, and Force Majeure situations. The bad weather and earthquake are specified in JSSS 2.7 Measures against Adverse Weather and Earthquakes, which I want to send it in English you soon.*

DCI: *I will wait to receive your document on this subject so I can understand your intentions.*

In addition, the Contractor shall fully inform the Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed, of the detail of the Emergency Response Plan. The Contractor shall also establish an emergency call system and carry out training based on the Emergency Response Plan.

The Emergency Response Plan, shall include the following items:

- (1) Expected types of emergency situation.
- (2) Description of the emergency call system.
- (3) Explanation of the specific measures for emergency response.
- (4) ~~Include Measures for quickly establishing locations of affected Contractor's Personnel, defining assembly points and the like.~~
- (5) Provisions for immediate changes and revisions to be made in response to changes in the Site situation

The Emergency Response Plan shall be submitted to the Engineer as part of the Safety Plan and be updated as necessary throughout the Time for Completion of the Works.

1.23.2 The Contractor shall establish an emergency call communication system that will require confirmation from all contact official departments, organisations and persons even in the event of an emergency. This shall include the creation of an emergency contact list, which shall be posted in a visible location such as the Contractor's Site office to inform all Contractor's Personnel.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel
- (2) Relevant government authorities and agencies: administrative agencies, police stations and fire stations etc.
- (3) Contractor's Personnel at the Site, particular individual's positions, head office etc., subcontractors, material suppliers and the like.
- (4) Other contractors engaged upon the Site or the Works

1.23.3 The Contractor shall conduct emergency response training based on the Emergency Response Plan which shall include:

- (1) Implementing a training programme at least every six months
- (2) Improving the emergency response plan based on training results
- (3) Providing details of the emergency response

The Contractor shall provide training for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed

Details of the training shall be included in the Emergency Response Plan and Safety Plan.

1.23.4 If and when an emergency occurs during the Time for Completion, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.23.5 The Contractor shall take measures such as the placement and installation of the following accident relief facilities and equipment, medical personnel, ambulances, etc.

DCI: NK please see above queries, the Contractor usually has no such obligations for force majeure events, so if this is required it must be fully specified and paid for. Usually only the use of existing site facilities is allowable technically in accordance with the Engineer's Instructions (and payment by Employer).

NK: As I explain above, the Contractor shall prepare the plan for predictable weather, earthquake and others from the Contractor's experience.

DCI: This may complicate interpretation contractually where force majeure has accepted definition. In most countries earthquakes are not so common and extreme weather likewise.

Please can we discuss

DCI: We assume that the following described in the draft as "Emergency Relief Plan" actually means a plan for dealing with common accidents on the Site. This heading is a little misleading, I suggest change to something like "Accident Relief Plan" so there can be no confusion with "Emergency Response Plan"

1.24 Accident Relief Plan

1.24.1. The Contractor shall prepare an Accident Relief Plan in consideration of the nature and timing of the Works and the location(s) of the Site and taking account at least of the minimum facilities and measures to be provided in accordance with the Specification for the Contract (refer also to JSSS Chapter 1: General Requirements, Part C) and including:

DCI - To be coordinated with Part C and Health

- (1) Availability of medical personnel who can provide first aid and additional medical assistance.
- (2) Availability of vehicles and drivers that can properly transport casualties to clinics on Site or hospitals off the Site.
- (3) Establishment of first aid room, clinic or like facilities on Site with equipment and consumables.
- (4) Arrangement of communication facilities and measures for emergency response.
- (5) Deployment of appropriate first aid appliances, aids, instruments and medicines and kits in accordance with the scale and characteristics of the Work.
- (6) First aid training, appointment of first aiders and dissemination of information.

It is to be noted that JSSS Chapter 1: General Requirements, Part C, lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.

1.25 Measures at the Time of Accidents Occurrence

1.25.1. When an accident occurs, the Contractor shall immediately discontinue the work task and implement the following measures as necessary.

- (1) Safely locate and extract casualties and provide first aid and other accident relief measures
- (2) Secondary accident prevention activities
- (3) Preserve the accident site, make safe and prevent anyone interfering or entering
- (4) Discontinue construction work related to or in the vicinity of the accident
- (5) Implement any further measures instructed by the Engineer

1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident or illness in accordance with PC4.8 [Contractor's Health and Safety Obligations]

DCI: NK, can we please attach an accident report form now? As an appendix, please let me have a draft and I will include

- (2) Having investigated and established the cause of any accident or illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures to prevent any reoccurrence.

1.25.3 Procedures for Resumption of the Works

Unless otherwise instructed by the Engineer, the procedure for resuming the Works after the occurrence of an accident or illness shall be as follows.

- (1) Contractor examines and formulates measures to prevent any reoccurrence and submits a description of such measures to the Engineer.
- (2) The Engineer may review the preventive measures.
- (3) The Contractor informs the Engineer with no less than two working days notice that he will resume the Works when he is ready to implement the preventive measures and restart such Works.
- (4) The Contractor resumes the Works.
- (5) The Contractor verifies the effectiveness of his preventive measures and informs the Engineer.
- (6) The Contractor implements risk assessment and revises the Safety Plan and Method Statements as necessary.

DCI: NK, please review and discuss the above carefully

1.26 Health Issues

DCI: What about health issues? The document is largely silent on this yet statistically this is the biggest problem

NK: May I know what kind of health issues you commented. We specify health issues such as dust, noise, heat are specified in JSSS 2.1 Working site environment.

NK: Do you mean if the health issues are asbestos, dusts including silica and lead, chemicals, sunlight, diesel engine exhaust emissions, frequent loud noise, frequent or excessive use of vibrating tools, frequent or excessive manual handling of loads, stress and fatigue.

DCI: Yes in part answer to your question and also health issues at Site in terms of what shall be provided as a guide and also:

Contractor should provide (or ensure) eyesight and hearing exams that do not have a significant effect on safety and other mobility and medical tests that are reasonable, all to be stated in JSSS.

We should not rely on local Laws but should stipulate health requirements to make sure that the contractor complies with this.

This will also require the Contractor to assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.

NK: We specify in 2.1 about dusts, noise and temperature. We do not specify about asbestos because the Laws of the country may have specified already and ODA projects may not handle asbestos except renovation works.

DCI: We surely cannot rely on local laws that in general JSSS is aiming to improve.

Renovation works occur frequently

NK: Do you have any suggestion about health issues?

DCI: See above.

This also requires research of other standards but what about medical facilities on Site, medical tests and also treatment of endemic diseases in certain countries. AIDS is covered in FIDIC (although not so necessary now perhaps) but what about others? Malaria nets, dengue patrols (Singapore style) etc. etc..

Also state criteria for provision of facilities at Site for example say related to the distance from Site to the nearest hospital. If say more than one hour provide a doctor(s) full time plus medical support plus nurses and reasonably equipped ambulance with driver.

Plus also same doctor and nurses may be able to provide a local JICA clinic?

All of the above requires coordination with GC6.8 but more clarity will be helpful as the present clause is frequently not applied properly.

Can we discuss further please, noting that this should really come from NK.

What do the Japanese regs. require?

The documents need to be comprehensive and helpful.

NK: *JSSS will be prepared at 2 stages. The 1st stage JSSS will cover the following table for basic and essential safety requirement and the 2nd stage will do for safety in sectors of road, river, tunnel, railway, etc.*

DCI: *Please can we discuss later, I am not sure if or how your ideas for later issues will work.*

1.27 Temporary Works

DCI: *The following are draft notes which in the main will probably be transferred and dealt with later in JSSS Chapter 7.1 but some reference may be necessary here.*

Please leave this here for now and we will coordinate this (and other parts) later. There is cross-reference to this clause in Part C.

NK: *I will send you 7.1 as soon as possible JICA gave us their draft of JSSS.*

DCI: *Please note that I have not changed any part of the following paragraph (except as highlighted in green) as I am waiting receipt of your further draft.*

The Contractor shall provide details at Bid stage (not calculations necessarily at this stage?) of all Temporary Works (TW) designs including Falsework for significant structures as listed in the Bidding Documents (refer to JSSS Chapter 1: General Requirements, Part C) and including for example:

- (1) Falsework equal to or higher than 3.5 m.
- (2) Overhead passage equal to or higher than 10m (bridge?)
- (3) Scaffolds (“scaffolding”?) equal to or higher than 10m can engineer check scaffolding design?.)
- (4) Other TW specified in the Contract or instructed by the Engineer.

DCI: *NK can we please discuss the above to clarify these and further requirements after which we will delete or re-word this*

What about other items such as TW for major bridge structures, tunnels, coffer dams, temporary dams, etc. ??

What is the Engineer required or intending to do with such information?

NK: *The Engineer can review design document by the Engineer’s design expert if he is assigned. If not, the Engineer shall review the design procedure and designs with his experience of TW.*

DCI: *We suggest that this could be dangerous as reliance needs to be placed upon the Contractor’s specialists not the Engineer. The check (if any) should be to ascertain that the Contractor has engaged and used such specialists. The Engineer does not (and should not) represent himself as an expert on temporary works (Falsework) design.*

Also if calculations and methods are submitted at Bid stage it could well be construed that they have been checked and accepted by the Engineer (otherwise why request them?) and if future failure occurs responsibility may be affected. Similarly if a future change say for compliance is instructed by engineer, variation may be claimed and responsibility may well also be compromised

Please let me study the future document when we receive it and I will then discuss further.

DCI: I recommend consideration of something like the following, which is still very much a draft idea for now. Please note my further suggestion that it is made optional in Part C for use on particular (not all) projects.

I still need to study this BS further.

Please also refer to separate definitions of Falsework, Formwork and other terms above.

1.26.1. Unless otherwise stated in the Bidding Documents, Bidders are required to comply with the guidance and recommendations contained in BS5975: 2019 Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.

1.26.2. The requirement for specifying compliance with BS5975: 2019 in the Bidding Documents by a Project Executing Agency shall be determined by the extent and nature of the Works, Temporary Works and in particular the extent and nature of Falsework and Formwork design. JICA recognise that the requirement may be greater on larger or more complex Works particularly those with a high content of Formwork and Falsework containing proprietary equipment and/or traditional structural and scaffolding solutions, which are:

- (1) Designed to support excessively heavy loads.
- (2) Of excessive height or unusual shape.
- (3) Of difficult access, or
- (4) With unusual structural solution.

1.26.3. Other alternative internationally accepted standards are also acceptable if approved by the Engineer but only if such standards contain equivalent requirements for management of Temporary Works including the design of Falsework (including Class A Falsework).

1.26.4. It is to be noted that BS5975: 2019 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975:2019 and shall submit such justification to the Engineer for his information and consent.

1.26.5. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.

1.26.6. Where the Bidding Documents state that BS BS5975: 2019 is to apply, the Contractor shall appoint at least the following principal specialist staff who will be dedicated to the Temporary Works:

- (1) Temporary Works Coordinator (TWC): responsible for ensuring the preparation and implementation of effective procedures and who shall retain overall responsibility for all Temporary Works on the Site including the Temporary Works of Subcontractors. The Contractor shall not use the TWC or other personnel of Subcontractors to act as his TWC.
- (2) Temporary Works Designer (TWD): responsible for preparing the design of all Temporary Works (including any Falsework). and who shall remain under the Contractor's responsibility and management.
- (3) Temporary Works Supervisors (TWS): responsible for the construction, safe use, maintenance, dismantling and removal of all Temporary Work in accordance with the design and the requirements of the TWC and TWD and for providing the HSO with the following information to permit further actions:
 - (a) Confirmation that the Temporary Works have been erected in accordance with the design and that such Temporary Works and ready to accept loading.
 - (b) Confirmation that the Permanent Works have attained adequate strength to allow

dismantling of the Temporary Works.

1.26.7. The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed and completed in accordance with BS5975: 2019 and the Contract. All such records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer

1.26.8. The TWC, TWD and TWS shall be appropriately qualified and experienced and the TWC and TWD shall be named in the Bid and hence the Contract. The TWD can be either Contractor's Personnel or an appropriately qualified and experienced specialist Subcontractor to be named in the Bid or be subsequently consented to by the Engineer.

1.26.9. Procedures for the appointment and any replacement of the TWC, TWD or TWS shall be the same as described for the HSO in JSSS Sub-Clause 1.7.

1.26.10. The Executing Agency (via their consultant) during the design stage shall consciously endeavour to remove or reduce risks in the Permanent Works as far as possible through the design process for example by changing high level in-situ concrete structures to precast or prefabricated structures, simplifying structures and applied finishes, services and the like.

1.26.11. Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and where possible shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The following clause requires particular and careful consideration and internal discussion.

1.26.12. The Contractor shall submit method statements for parts of the Temporary Works (including designs and calculations of Falsework) as may requested by the Engineer under the Contract for his review.

The Engineer's review shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer has no obligation under the Contract to review Temporary Works design however he may choose to do so for those parts which he may consider to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task. The Engineer shall have no obligation to issue any response or comment, however if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC3.1(c) and issued without prejudice to the Contractor's overriding responsibility for the adequacy of the Temporary Works.

1.26.13. Where the Bidding Documents do not require the Contractor to comply with BS5975: 2019, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the provision, use, management, dismantling and removal of Temporary Works including for example by ensuring the following:

- (1) Appointment of appropriately qualified and experienced staff.
- (2) Preparation of an adequate Temporary Works design.
- (3) Independent internal or external checking of the Temporary Works Design.
- (4) Preparation of a Temporary Works register and records
- (5) Pre-erection inspection of all Temporary Works materials, components and equipment.
- (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the temporary works, including procedures to:
 - (c) Check that the Temporary Works have been erected in accordance with the design

and issue by the HSO of a formal “permit to load”.

- (d) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO of a formal “permit to dismantle” where necessary.

1.26.14. The Safety Plan shall include measures to ensure that the design, erection, maintenance, dismantling and removal are all carried out by competent and experienced individuals and in a controlled and closely supervised manner.

1.27.2 Whether there is or is not any legal requirement under the Laws of the Country for qualification, all of the Contractor’s Temporary Works staff and any specialist Temporary Works Subcontractors shall have appropriate academic and Temporary Works coordination, design or supervision qualification as appropriate, work experience in construction and in Temporary Works Design and whom the Contractor considers are qualified to perform the duties.

ANNEXES TO PART B: JICA REQUIREMENTS

Annex B.1: Items to be described in the Safety Plan

DCI: NK please note that text generally has been changed from original so that this is coordinated with other changes basically to make it work better.

Further MD coordination with Part C is required

Coordination is also required in future for all other Technical Sections 2 onwards (e.g. health) where further requirements may make revision here necessary.

(1) Description of the Works

A description of the Works in outline and with overall layout plan to give an understanding of the overall layout and content of the Works showing main construction items and areas, roads, road access locations, working areas, storage areas, temporary offices, laydown areas, warehouses and the like facilities and including a summary of principal work items and significant quantities, etc.

(2) Contractor's Corporate Policy on Health and Safety Management

A description of the Contractor's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Contractor's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Contractor's Personnel

A description of the health and safety management organisation at Site headed by the Contractor's Health and Safety Officer at Site and showing the responsibility and authority of all other Contractor's Personnel persons involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country to be complied with for the health and safety management of the Works, unless superseded by JSSS. If superseded by JSSS then the relevant clause number of JSSS shall be inserted.

(5) Contractor's Safety Certification and Implementation Policy

NK see query in JSSS Chapter 1 (Sub-Clause 1.5) and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under Clause C1.

The following Sub-Clauses have also been added to JSSS Chapter 1.

Unless otherwise expressly stated in the Bidding Documents, the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

An authorised true copy of the current certification shall be provided in this part of the Bid and shall subsequently be included with the Contract.

(6) Temporary Works

NK this requires to be added as it is an essential part of the Safety Plan

Description of the arrangements for controlling risks arising from the use of Temporary Works by ensuring that the requirements of JSSS Chapter 1: Temporary Works, Sub-Clause 1.27 are fulfilled.

(7) Safety Measures for Contractor's Equipment and Temporary Works

Requires changing due to the above added Sub-Clause

A description of the procedures for inspecting and maintaining Contractor's Equipment and Temporary Works together with all spare parts including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(8) Health and Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving workers feedback and opinions regarding health and safety.

(9) Plans for Health and Safety Education and Training

An outline description of the proposed education and training methods and facilities including participants, time, teaching materials, policies for selecting educators and trainers, etc. and covering safety induction.

(10) Deployment of Health and Safety Related Facilities and Personal Protective Equipment (PPE)

A description of the intended policies for the deployment of facilities and equipment to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general Personal Protective Equipment (PPE) and the use of additional PPE for particular working conditions and environments.

(11) Health and Safety Rules

A description of the general health and safety rules (e.g. limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site.

If a specific work area, condition or environment (such as operational areas, hazardous areas, Confined Spaces or the like) requires detailed rules, this shall be stated and detail will be developed in later issues of the Safety Plan.

(12) Site Safety Inspection Plan

A description of the methods for on-Site inspections showing locations and frequency. The description shall also include the methods for reporting, recording and utilising results.

Also attaching warning notices and labelling hazardous equipment, structures and the like?

(13) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any other trespassers upon the Site will be prevented. The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.

(14) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

(15) Prevention of Construction Accidents at Site

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(16) Emergency Response Plan

A description of the Emergency Response Plan including the action plan for rescue of casualties in an emergency such as when a major accident or disaster occurs, work discontinuation, notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.

(17) Accident Relief Plan

A description of the Accident Relief Plan including the procedure for first aid at the location and time of any accident and a description of appropriate medical facilities to be provided at the Site, including for example nurse, doctor, ambulance etc. all as stated in the Bidding Documents. The procedure shall also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(18) Facilities for Maintaining the Occupational Health Environment

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

(19) Work Discontinuation Criteria

A description of the proposed criteria for discontinuation by HSO of work and person responsible for issuing instructions for such discontinuation—for example when danger is predicted for work due to strong wind, heavy rain, snow or other factors

(20) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings, 5S and KYT activities (refer to JSSS Sub-Clause 1.13)

(21) Legal Remedies and Requirements after Occupational Accidents

A description in brief of the legal requirements and remedies in the case of injuries and death at work and for personnel affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

Annex B.2: Dangerous or Harmful Operations

DCI: I have concerns about whether the information in the following annexes is of any value in an international context, I think not. In a domestic Japanese sense these requirements are of course very important as they are integrated with many other Japanese laws and regulations. However when abbreviated extracts only are included it does not have great meaning and there appears to be much missing which may not be covered by the fall-back (OSHA).

Please consider all very carefully.

I am inclined to suggest that a simple basic requirement such as GC6.9 is sufficient, perhaps adding some reference to training and making the contractor responsible for all is probably better than going into so much detail for only a part.

NK: we will reconsider and discuss with JICA about Annex 2.

The following is a list of example work types classified/defined as “Dangerous or Harmful Operations”

DCI: Is this Annex intended to be a definition?

When Contractor’s Personnel are engaged in the following or other potentially dangerous or harmful operations such personnel shall be given special health and safety training appropriate to the operations concerned.

Examples of such operations include (but are not restricted to) the following:

(as provided for by the Ordinance of the Ministry of Health, Labour and Welfare).

DCI: I requested a complete list at our last meeting however, according to the above Ordinance there are many more operations and requirements in addition to this list and also as this effectively applies only in Japan; is therefore a real need for this?

- (1) Crane operation and mobile crane operation
- (2) Welding and cutting of metal using arc welder what about gas welders and cutting machines?
- (3) Forklift operation
- (4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: 3t or more) why 3t or more? Why not all?

DCI: Vehicle-type? What does it mean exactly? Does it mean wheeled? If so how about tracked equipment? What is the difference between (4) and (5)?

- (5) Vehicle-type construction equipment operation (for foundation work: 3t or more)

DCI: why 3t or more? Why not all? what about track type?

- (6) Roller operation what type?
- (7) Operations that use organic solvents

DCI: what about other harmful substances and explosives for example?

- (8) Sling work
- DCI:** meaning hoisting and rigging work

- (9) Rope access work
- DCI:** cradles and hoists?

- (10) Work to be performed using a full harness type of fall protection device where the height is 2 meters or more and it is difficult to provide for the work floor

DCI: meaning of difficult? Too expensive? Is this coordinated with other chapters?

What about small tools (drills and angle grinders) all electrical works, gas pipe works etc. etc.?

Ditto related academic educational achievements?

And Confined spaces?

NK: we will reconsider and discuss with JICA about Annex 2.

Annex B.3: Subjects of Special Education for Dangerous or Harmful Operations

DCI: Please note that this still needs English edit and correction, some commented on below, but problem exists throughout.

When Contractor’s Personnel are engaged in the following or other potentially dangerous or harmful operations such personnel shall be given special health and safety training appropriate to the operations concerned.

DCI: Is this “health and safety training” or “skill training”?

It appears to be operator skill training? Is this the purpose?

Can this apply internationally?

Examples of special training for the above listed sample operations include (but are not restricted to) the following:

(1) Special education for crane operation and mobile crane operation:

DCI: Surely this is common to all crane operations why particularise one type? Or training should be specific for the types of crane being operated on Site.

Subject	Scope
1 Knowledge of mobile and other cranes	Type and model, main structural parts, operating device, safety device, brake function, handling method, method of inspection and maintenance
2 Knowledge about motor and electricity	Internal combustion engine, steam engine, hydraulic drive, danger from electric shock
3 Knowledge of mechanics necessary for operation of mobile crane and other cranes	Force (composition, decomposition, balance and moment), centre of gravity, load, wire rope, hook and hook strength, relationship between wire rope application and load
4 Practical skill	Method of mobile crane and other crane operation Signs for mobile crane and other crane operation

DCI: What is the extent of “practical skill training” and others above, is it testing to ascertain of skills exist?

(2) Welding and cutting of metal performed using arc welder

DCI: Gas welding also?

Subject	Scope
1 Knowledge of arc welding etc.	Basic theory of arc welding, basic knowledge about electricity
2 Basic knowledge on arc welding equipment	DC arc welder, AC arc welder, automatic electric shock prevention device for AC arc welder, welding rod and rod holder, wiring
3 Knowledge of arc welding work methods	Inspection and maintenance before work, methods of welding and cutting, inspection of welds, post-work measures, accident prevention

4 Practical skill	Handling of equipment for arc welding work
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(3) Forklift operation

Subject	Scope
1 Knowledge of equipment structure and handling methods for the travel of a forklift. <i>What is the meaning of this?</i>	Structure and method of handling for forklift engine, power transmission device, traveling device, steering device, braking device, auxiliary device for traveling
2 Knowledge of equipment structure and handling methods for cargo handling <i>What is the meaning of this?</i>	Structure and handling method of hydraulic equipment (including safety valve), head guard, backrest, auxiliary devices for cargo handling, method of inspection and maintenance
3 Knowledge of mechanics necessary for forklift operation	Force (composition, decomposition, balance and moment) weight, centre of gravity and stability of objects, speed and acceleration, load, stress, material strength <i>This appears to be excessive for the average fork lift driver?</i>
4 Practical skill	Operation of traveling, operation of cargo handling

(4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: 3 t or more)

Meaning see before also?

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods motors for vehicle-type construction equipment (for ground levelling, transportation, loading and digging), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance
4 Practical skill	Operation of traveling, operation of equipment for work

(5) Vehicle-type construction equipment operation (for foundation work: 3 t or more)

Less than 3t also?

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods of motors for vehicle-type construction equipment (for foundation work), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for foundation work), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for foundation work), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance
4 Practical skill	Operation of traveling, operation of equipment for work

(6) Roller operation

Subject	Scope
1 Knowledge of roller	Types and applications of rollers, structure and handling method of Power transmission devices of rollers, working devices, steering devices, brakes, electrical devices, alarm devices and auxiliary devices, method of inspection and maintenance
2 Knowledge of general matters required for roller operation	Mechanics necessary for operation, construction method by roller
3 Practical skill	Roller operation method

(7) Operations that use organic solvents

Include here within equipment and only solvents, no other chemicals or hazardous substances?

Subject	Scope
1 Work environment management	Method of maintenance and inspection of equipment for venting prevention measures of organic solvent vapour and equipment for ventilation, Grasp and maintain the working environment
2 Work management	Work management method, occupational health protective

	equipment
3 Health management	Types and hazards of organic solvents, operations using organic solvents, health hazards caused by organic solvents, prevention methods and first-aid measures, medical check-up and follow-up measures
4 Accident case	Accident cases and prevention measures

(8) Sling work

Subject	Scope
1 Knowledge of cranes, mobile cranes, other cranes and derricks (hereinafter referred to as "cranes etc.")	Type and model, structure and function, safety device and brake
2 Knowledge of mechanics necessary for slinging work	Force (composition, decomposition, balance and moment), centre of gravity of simple figures and stability of objects, friction, weight, load
3 Method of slinging	Selection and use of the sling tool, basic work action (including safe operation method), method of signalling
4 Practical skill	Signs for operation, work with a sling for a crane

(9) Rope height work

Subject	Scope
1 Knowledge of rope height work	Method of rope height work
2 Knowledge about main ropes etc.	Types of main ropes, structure, strength and handling methods, methods of inspection and maintenance of main ropes, etc.
3 Knowledge about prevention of occupational accidents	Measures for the prevention of occupational accidents caused by the fall, methods of using, maintaining and inspecting safety belts and protective helmet
4 Practical skill	Method of rope height work, inspection of main rope etc.

(10) Work to be performed using a full harness type of fall prevention equipment where the height is 2 meters or more and it is difficult to provide for the work floor

Subject	Scope
1 Work knowledge	Types of equipment used for work, structure and handling methods, methods for inspecting and maintaining equipment used for work, methods of work
2 Knowledge of fall prevention equipment	Types and structures of full harnesses and lanyards for fall prevention equipment, methods for mounting the full

(limited to full harness type, the same shall apply hereinafter)	harnesses, installation and selection methods for lanyards, methods of inspection and maintenance of fall prevention equipment, how to use the related equipment for fall prevention equipment
3 Knowledge about the prevention of occupational accidents	Measures to prevent occupational accidents due to fall, measures to prevent hazards due to falling objects, measures to prevent electric shock, methods of using protective helmet and methods of maintenance and inspection, and other accident due to work and its preventive measures
4 Practical skill	Method of using fall prevention equipment

Annex B.4: Work Requiring the Assignment of an Operation Leader

The following is a list of example work types that require the appointment and assignment of an **Operation Leader** to each team of workers engaged upon such work at the Site.

There are many more

Such Operation Leaders shall be given special health and safety training appropriate to the operations concerned.

Examples of operations shall include (but are not restricted to) the following:

- (1) Earth excavation and shoring work
- (2) Tunnel excavation work
- (3) Tunnel lining work
- (4) Excavation work for quarrying
- (5) Formwork, Falsework, supports and shoring assembly/dismantling work
- (6) Scaffolding assembly/dismantling work
- (7) Steel frame fabrication and erection work on buildings and structures
- (8) Steel bridge fabrication and erection work
- (9) Wooden, masonry and other building work
- (10) Demolition work of concrete, masonry or steel structures
- (11) Reinforced concrete construction work
- (12) Organic solvent work and other hazardous substances or materials
- (13) Work in hazardous areas
- (14) Work in Confined Spaces

Annex B.5: Subjects of Skill Training Course for Operation Leaders

DCI: Skill training is included for operation leaders but no such skill training or checking is included for other skilled persons is this correct?

Is this “training” or checking to ascertain that operation leaders have the skills?

If “Operation Leaders” (see out earlier assumed definition based on JICA scop) include foremen, gangers, charge hands and the like in other countries, and if they are already qualified and paid as foremen, gangers, charge hands and the like, do they need to be re-trained and re-qualified as follows?

These appear to be very detailed training requirements.

This Annex requires significant coordination with Annex B.4, with addition and editing before it can be finalised but is it necessary? Any changes in Annex B.4 need to be added here.

Add work in hazardous areas and work in Confined Spaces

Examples of special training for the operations leaders shall include (but are not restricted to) the following:

(1) Operation Leader for Earth excavation and shoring work

Subject	Scope
1 Knowledge of work method	Method of ground excavation, treatment of loose rocks and buried objects, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock, and the type, material, structure, assembly drawing, maintenance and inspection of earth shoring, matters related to installation and removal of strut and wailing
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases, measures for preventing hazards, collapse prediction, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(2) Operation Leader for tunnel excavation work

Subject	Scope
1 Knowledge of work method	Method of tunnel excavation, mucking, and types, structure and method of assembling of tunnel support, method of installing rock bolts
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases and toxic gases, measures for preventing hazards
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(3) Operation Leader for tunnel lining work

Subject	Scope
1 Knowledge of work method	Types, materials, structure and assembling drawings, inspection and repair of tunnel support, method of assembling and dismantling tunnel support
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, instruments and tools, measures for preventing hazards, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(4) Operation Leader for excavation work for quarrying

Subject	Scope
1 Knowledge of rock types, drilling methods for rock excavation, etc.	Types of rock, method of excavation for extraction of rock, treatment of loose rock, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases, measures for preventing hazards, collapse prediction, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(5) Operation Leader for formwork, Falsework, supports and shoring assembly/dismantling work

Subject	Scope
1 Knowledge of work method	Types and materials of form and form shoring, structure of form shoring, assembly drawings, inspection, etc. Methods of assembly and dismantling of form and frame shoring
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(6) Operation Leader for scaffolding assembly/dismantling work

Subject	Scope
1 Knowledge of work method	Types of scaffolds, materials, structures and assembly drawings, methods of scaffold assembly, disassembly and

	change of work, inspections and repairs. Matters of structures and methods assembly, disassembly and changes of climbing bridges, protective shelf, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(7) Operation Leader for steel frame fabrication and erection work on buildings and structures

Subject	Scope
1 Knowledge of work method	Types of buildings and towers, materials, structures, design drawings, shop drawings, equipment and tools, methods of work for assembling steel frames of buildings, etc., inspection
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(8) Operation Leader for steel bridge fabrication and erection work

Subject	Scope
1 Knowledge of work method	Types of bridges, materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(9) Operation Leader for wooden, masonry and other building work

Subject	Scope
1 Knowledge about constructing structural members of buildings, installing floors, roofs, etc.	Construction methods of main structural parts such as frame, floor structures, walls, construction methods of roof and outer wall foundation, joints, order of construction, reinforcement method for frame
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(10) Operation Leader for demolition work of concrete or masonry structures

Subject	Scope
1 Knowledge about structural members including concrete masonry and reinforcement etc.	Types, structures, construction method of concrete and masonry work, types of method of construction, method of work, work plan, coordination with m & e services etc
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(11) Operation Leader for reinforced concrete construction work

Subject	Scope
1 Knowledge of work method	Types of materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(15) Operation Leader for organic solvent work and other hazardous substances or materials

Subject	Scope
1 Knowledge of health hazards and their preventive measures.	Pathology, symptoms, prevention methods, first-aid measures and health problems caused by such materials
2 Knowledge for improving the work environment	Properties of organic solvents, and other hazardous substances or materials, management of equipment and other facilities related to production and handling of such materials, methods of evaluation and improvement of working environment
3 Knowledge of protective equipment	Type, performance, method of use and management of protective equipment pertaining to the production or handling of such materials
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence <i>Meaning?</i>

JICA STANDARD SAFETY SPECIFICATION (JSSS)

CHAPTER 1: GENERAL REQUIREMENTS

PART C: REQUIRED AMENDMENTS TO “JICA STANDARD BIDDING DOCUMENTS”

[This Part C applies to Executing Agencies (employers and their consultants) for use in the preparation of PQ and Bidding Documents, evaluation of Bids and award of Contracts]

JICA advise that the amendments described will be made to the “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA), October 2012, version 1.1. (hereinafter referred to as “JSBD”).

The Bidding Documents for particular Projects where JSSS has become effective (as described in the above “Part A: Preamble Notes”), shall be drafted to take account of such amendments in advance of the publication of the updated JSBD, in accordance with the following instructions.

BIDDING PROCEDURES:

C1. Particular Safety Requirements:

Part 1 – Bidding Procedures, Section I: Instructions to Bidders, Section VI. Works Requirements, Specification, pages WR-3 to WR-5

Add the following additional text on page WR-5 to follow on from the existing text.

JICA Standard Safety Specification (hereinafter referred to as JSSS) contains detailed requirements for health and safety including procedural requirements for the preparation, submission, review and response processes for Method Statements and Safety Plans for the execution of the Works.

Care shall be therefore be taken when drafting Bidding Documents for Projects where JSSS is to be used to ensure that there is no duplication of the JSSS requirements in the Technical Specification¹ for such Projects. Unnecessary and duplicated reference **must** be avoided.

JICA stress the importance of the Employer putting in place a sound working environment for the Contractor and therefore Bidding Documents should include for example: reasonable Time(s) for Completion; reasonable, continuous and unobstructed access to the Site and sufficient Site area(s), working and storage areas, all wherever possible. Requirements shall be clearly described in the Bidding Documents.

It must also be recognised that JSSS constitutes a range of standard safety requirements that shall apply generally on their ODA Projects and consequently it is necessary to specify particular safety requirements for specific Projects. Such particular safety requirements shall be carefully and precisely drafted and included in the Technical Specifications of such Projects, covering for example the following²:

JSSS Chapter 1 Reference	Item
1.5 Contractor’s Safety Certification	State if the Bidder/ Contractor is required to be formally accredited under OHSAS 18001 and if so require submission of a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or equivalent from an internationally

¹ To avoid any potential confusion with the “JICA Standard Safety Specification”, reference is made above to “Technical Specification” as this is the description used in JSBD although not in the FIDIC Conditions of Contract where this is defined as “Specification”.

² See also later checklist

	recognised and approved organisation
1.7 Contractor's Health and Safety Management Staff	<p><i>(On small Projects)</i> State if the HSO is NOT required to be assigned full-time on the Works.</p> <p>If not so stated in the Bidding Documents, contractors must assign full-time dedicated HSO and if applicable other support personnel.</p> <p>JICA advise that full-time assignment is the normal requirement and part-time or shared assignment is only allowable on very small projects with separate written justification to be provided by the Executing Agency to JICA.</p>
1.11 Project Safety Committee	<i>(On large Projects)</i> State if a Project Safety Committee is to be established for the Project and add any further requirements.
1.12.2 Employer's other contractors (see also GC2.3)	Describe the individual scope of Works for any other contractors to be employed by the Employer on the Site and where possible identify them by name together with any legally constituted public authorities who may be employed in the execution on or near the Site of any work not included in the Contract, and specify working locations, access and timing as far as possible.
1.16 Engineer's Safety Representative	<i>(On large Projects)</i> State if the Engineer will appoint a full-time or part-time Safety Representative as an assistant upon the Works or state if the Engineer will act in this capacity.
1.24.6 Accident Relief Plan	<p><i>MD to Coordinate in future with 1.24, 1.25 Health and with other Sections</i></p> <p>Describe the minimum measures and facilities to be provided in consideration of the location(s) of the Site and the location, nature and timing of the Works, including:</p> <ol style="list-style-type: none"> (1) Medical personnel to provide first aid and additional medical assistance, at least certified as having successfully completed a first aid course by a recognised provider, such as the Red Cross and also including doctors and nurses where required by the (2) Suitably equipped ambulances or other approved vehicles, with drivers and attendants that are properly trained to transport casualties to medical personnel staff and facilities on Site or to medical staff and facilities including hospitals off the Site. (3) First aid room, clinic or like facilities on Site and specify equipment and consumables (4) Communication facilities and measures for emergency response (5) First aid appliances, aids, instruments and medicines.

	<p>(6) First aid training, appointment of first aiders and dissemination of information.</p> <p>(7) Include others as appropriate</p>
1.26 Health Issues	<p><i>requires further development, addition and coordination by MD</i></p> <p><i>Awaiting NK documents to ascertain scope.</i></p>
<p>1.27 Compliance or otherwise with BS5975: 2019 Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework</p>	<p><i>DCI - I suggest that non-compliance should be the exception rather than the norm.</i></p> <p>If it is necessary for the Bidder to comply with BS5975: 2019 on the Works, the Executing Agency shall ensure that the Bidding Documents clearly state this. For this purpose reference shall be made to the basic criteria described in JSSS Sub-Clause 1.27.</p> <p>If the Bidder is NOT required to comply with BS5975: 2019 on the Works, the Bidding Documents shall clearly state this, and separate written justification shall be provided by the Executing Agency to JICA.</p> <p><i>NK please refer to queries on this subject in 1.27</i></p> <p>If Bidders are required to comply with BS5975: 2019, the Bidding Documents shall confirm that the following Temporary Works coordination, design and supervision staff are required:</p> <ol style="list-style-type: none"> (1) Temporary Works Coordinator (TWC). (2) Temporary Works Designer (TWD). (3) Temporary Works Supervisor (TWS). <p>If compliance is required TWC and TWD, Bidding Documents should require them to be named in the Bid.</p> <p>JICA note that this (and more) can always be proposed by the Bidder whether included as a specified requirement or otherwise.</p> <p>If the Bidders are not required to comply with BS5975: 2019, the Bidding Documents shall state that the Bidder is to comply in any event with the requirements of Sub-Clause 1.26.13 and 1.26.4 and submit full details in the Safety Plan.</p>
<p><i>The following all requires further development, addition and coordination by MD:</i></p>	
<p>Temporary Perimeter Fencing:</p>	<p>Simple fencing to complicated security depends upon Project and location and nature of works.</p> <p>Improvement Projects (e.g. airports, roads and railways) may not need this as existing or maybe new permanent</p>

	<p>fencing can be used.</p> <p>Gates barriers and other treatment at Site entrances e.g. simple gate or barrier through to complicated type including communications, lighting and temporary power</p> <p>Security at entrance and around the site (minimal, extensive or in some cases on existing facilities) already provided by employer</p> <p>Fencing within the site around hazardous areas or around operating plant areas.</p>
<p>Temporary Accommodation and Facilities</p>	<p>Should list the required facilities in a range such as none for urban Projects, to full accommodation for rural Projects where no suitable accommodation.</p> <p>Health and sanitation requirements</p> <p>Leisure facilities</p> <p>Temporary Transportation Requirements</p> <p>Nothing for urban Projects, to full provision, e.g, buses and drivers etc for rural Projects where nothing safe is available.</p> <p>Canteen Facilities</p> <p>Sanitation Facilities</p> <p>etc etc</p>
<p>Others to add - MD</p> <p>Here or Check-list Annex to consider. Probably the latter</p>	

To assist with compliance of the above requirements, a checklist has been prepared and is attached to this Part

To be coordinated by MD with the later checklist

C2. Required Detail of Safety Plans in Bid:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Safety Plan, page BF-33.

Delete “[Insert Safety Plan]” and in this place insert the following:

Prepare the Health and Safety Plan including details of all items listed below:

It is understood that the Bid Stage Safety Plan will be developed by the Contractor in more detail in the Safety Plan issued at Commencement Stage and at later stages but it is important that at Bid stage sufficient information is provided so that the following can be understood and evaluated.

Irrespective of what the Bidder may include in his plans and of any subsequent acceptance, approval or consent to the same, the detailed requirements of JSSS will continue to apply and prevail unless otherwise specifically agreed later in writing by the Engineer.

NK For Bidding purposes, the following is a copy of Annex 1, please coordinate as necessary if changes are made to Annex 1 and make the same changes here

(1) Description of the Works

A description of the Works in outline and with overall layout plan to give an understanding of the overall layout and content of the Works showing main construction items and areas, roads, road access locations, working areas, storage areas, temporary offices, laydown areas, warehouses and the like facilities and including a summary of principal work items and significant quantities, etc.

(2) Contractor's Corporate Policy on Health and Safety Management

A description of the Contractor's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Contractor's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Contractor's Personnel

A description of the health and safety management organisation at Site headed by the Contractor's Health and Safety Officer at Site and showing the responsibility and authority of all other Contractor's Personnel persons involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country to be complied with for the health and safety management of the Works, unless superseded by JSSS. If superseded by JSSS then the relevant Clause or Sub-Clause number of JSSS shall be inserted.

(5) Contractor's Safety Certification and Implementation Policy

NK see query in JSSS Chapter 1 (Sub-Clause 1.5) and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under item CI.

The following Sub-Clauses have also been added to JSSS Chapter 1.

Unless otherwise expressly stated in the Bidding Documents, the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

An authorised true copy of the current certification shall be provided in this part of the Bid and shall subsequently be included with the Contract.

(6) Temporary Works

NK this requires to be added as it is an essential part of the Safety Plan

Description of the arrangements for controlling risks arising from the use of Temporary Works by ensuring that the requirements of JSSS Chapter 1: Temporary Works, Sub-Clause 1.27 are fulfilled.

~~(7)~~ Safety Measures for Contractor's Equipment and Temporary Works

Requires changing due to the above added Sub-Clause

A description of the procedures for inspecting and maintaining Contractor's Equipment and Temporary Works together with all spare parts including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is

- maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.
- (8) Health and Safety Information Sharing and Communications Policy
- A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.
- A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving workers feedback and opinions regarding health and safety.
- (9) Plans for Health and Safety Education and Training
- An outline description of the proposed education and training methods and facilities including participants, time, teaching materials, policies for selecting educators and trainers, etc. and covering safety induction.
- (10) Deployment of Health and Safety Related Facilities and Personal Protective Equipment (PPE)
- A description of the intended policies for the deployment of facilities and equipment to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general Personal Protective Equipment (PPE) and the use of additional PPE for particular working conditions and environments.
- (11) Health and Safety Rules
- A description of the general health and safety rules (e.g. limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site.
- If a specific work area, condition or environment (such as operational areas, hazardous areas, Confined Spaces or the like) requires detailed rules, this shall be stated and detail will be developed in later issues of the Safety Plan.
- (12) Site Safety Inspection Plan
- A description of the methods for on-Site inspections showing locations and frequency. The description shall also include the methods for reporting, recording and utilising results.
- Also attaching warning notices and labelling hazardous equipment, structures and the like?
- (13) Site Security
- A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any other trespassers upon the Site will be prevented. The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.
- (14) Policy for Preventing Traffic Accidents
- A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.
- (15) Prevention of Construction Accidents at Site
- A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.
- (16) Emergency Response Plan

A description of the Emergency Response Plan including the action plan for rescue of casualties in an emergency such as when a major accident or disaster occurs, work discontinuation, notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.

(17) **Accident Relief Plan**

A description of the Accident Relief Plan including the procedure for first aid at the location and time of any accident and a description of appropriate medical facilities to be provided at the Site, including for example nurse, doctor, ambulance etc. all as stated in the Bidding Documents. The procedure shall also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(18) **Facilities for Maintaining the Occupational Health Environment**

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

(19) **Work Discontinuation Criteria**

A description of the proposed criteria for discontinuation by HSO of work and person responsible for issuing instructions for such discontinuation—for example when danger is predicted for work due to strong wind, heavy rain, snow or other factors

(20) **Monitoring and Review of Health and Safety Management Activities**

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings, 5S and KYT activities (refer to JSSS Sub-Clause 1.13)

(21) **Legal Remedies and Requirements after Occupational Accidents**

A description in brief of the legal requirements and remedies in the case of injuries and death at work and for personnel affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

C3. Bid Evaluation Requirements for Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section III. Evaluation and Qualification Criteria, 1, Evaluation, 1.1 Evaluation of Technical Bids.

(Applies to both Section III. Evaluation and Qualification Criteria (Following Prequalification) and Section III. Evaluation and Qualification Criteria (Without Prequalification), Pages EQC-1)

In the paragraph stating [Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the Contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI, Works Requirements.] insert "and Safety Plan" in the third line after the words, "work methods".

Insert the following additional paragraph after the above paragraph:

"Evaluation of the Safety Plan shall take account of the Health and Safety Officer, and if compliance with BS5795: 2019 is a specified requirement of the Bidding Documents (refer to JSSS Chapter 1: General Requirements, Part C, Clause C1) of any principal Temporary Works coordination, design and supervision staff, under item in 1.1.2 Personnel and of PPE and any other safety equipment from the Safety Plan in 1.1.3 Equipment."

C4. Health and Safety Officer and (if applicable) Temporary Works staff:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders Section III. Evaluation and Qualification Criteria against 1.1.2 Personnel,

Delete position 2 as stated and insert as follows:

2 Health and Safety Officer at the Site

Delete position 3 and the words “e.g. Health and Safety (Accident Prevention Officer) and insert the following:

(if any of the following are a specified requirement of the Bidding Documents by reference to JSSS Chapter 1: General Requirements, Part C, Clause C1):

3. Temporary Works Coordinator

4. Temporary Works Designer

5. Temporary Works Supervisor

On the following line insert the words:

Other personnel to be inserted as appropriate.

Under “Notes for Employer” delete notes 1 and 2 and in this place insert the words:

The proposal for all required personnel shall be evaluated.

C5. Bidders Safety Declaration (Form BSD):

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms

Include ~~the attached~~ “Form BSD - Bidders Safety Declaration” in the Bidding Documents after the existing Form-ACK, with new page BF-56; renumber existing pages BF-56 and BF-57 appropriately and insert suitable reference in the Table of Forms on page BF-1.

The Employer requires the Bidder to appoint the Health and Safety Officer at the Site (HSO) prior to Bid submission and this HSO shall sign Form BSD in addition to the Bidder’s Official Representative.

Please refer to Annex C.2 to this Part C for a copy of Form BSD

PARTICULAR CONDITIONS OF CONTRACT:

C6. Submission and Review of Method Statements and Safety Plans:

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 4.1 Contractor’s General Obligations	<p>Delete that part of the fifth paragraph of this Sub-Clause which states:</p> <p>The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.”</p> <p>and in this place insert:</p> <p>(a) The Contractor shall, whenever requested by the Engineer, submit Method Statements and Safety Plans each with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works or any part of the Works. The Contractor shall submit the requested information</p>
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	<p>within fourteen (14) days of the date of the request.</p> <p>(b) The Engineer may review the Method Statements and/or Safety Plans and may give notice to the Contractor stating the extent to which the Method Statement and /or Safety Plan does not comply with the Contract. Within 14 days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no such notice within 21 days of the date of receipt of the Method Statement and/or Safety Plan, the Contractor shall proceed in accordance with the Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within 7 days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within 14 days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(d) The Contractor shall submit a revised Method Statement and/or Safety Plan whenever required by the Engineer or when any previous Method Statement and/or Safety Plan is inconsistent with actual conditions or requirements prevailing at the Site in accordance with the requirements described in items (a) to (c) above.</p> <p><i>DCI: NK can we discuss the requirement for Particular Safety Plans as necessary.</i></p>
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C7. JSSS Comprised as Part of the Contract with Further Safety Requirements:

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause 4.8 Contractor’s Health and Safety Obligations</p>	<p><i>Delete this Sub-Clause completely and replace with the following:</i></p> <p>The Contractor shall:</p> <p>(a) Comply with all applicable health and safety Laws of the Country, all standards and regulations,</p> <p>(b) Comply with all applicable health and safety obligations specified in the Contract including those contained in the JICA Standard Safety Specification (JSSS) and which as an entire document is to be read and construed as an</p>
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	<p>integral part of the Contract by virtue of this Contract Sub-Clause amendment;</p> <p>(c) Comply with all directions issued by the Contractor's Health and Safety Officer (appointed under Sub-Clause 6.7 [<i>Health and Safety</i>] as amended by PC6.7;</p> <p>(d) Take care of the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed;</p> <p>(e) Keep the Site, the Works (and the other places (if any) where the Works are being executed) clear of unnecessary obstruction so as to avoid danger to these persons;</p> <p>(f) Provide fencing, lighting, safe access, guarding and watching of:</p> <p>(i) the Works, until the Works are taken over under Clause 10 [<i>Employer's Taking Over</i>]; and</p> <p>(ii) any part of the Works where the Contractor is executing outstanding works or remedying any defects during the Defects Notification Period; and</p> <p>(g) Provide any Temporary Works (including roadways, footways, guards and fences) that may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land and property.</p> <p>Within 28 days of the Commencement Date and not less than 28 days before commencing any work at the Site, the Contractor shall submit to the Engineer for information an updated Safety Plan showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works, in the comprehensive detail required by the Bidding Documents.</p> <p>This shall be based upon the Safety Plan submitted at Bid Stage developed as necessary to provide the full information required.</p> <p>This Safety Plan shall be in addition to any other similar document required under applicable health and safety Laws of the Country.</p> <p>The Safety Plan shall set out or refer to all the health and safety requirements:</p> <p>(a) that are stated in JSSS;</p>
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	<p>(b) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and</p> <p>(c) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Works are being executed.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer, shall be in accordance with PC4.1 [<i>Contractor's General Obligations</i>].</p> <p>In addition to the safety reporting requirements of sub paragraph (g) of Sub-Clause 4.21 [<i>Progress Reports</i>] the Contractor shall inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than 24 hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.</p> <p>The Contractor shall, comply with the health and safety recording and reporting requirements of JSSS.</p> <p>The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p>
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C8. Change “accident prevention officer” to “Health and Safety Officer”:

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 6.7 Health and Safety	In the second paragraph, delete the words “accident prevention officer at the Site” and insert “Health and Safety Officer at the Site ”
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C9. Revised Order of Priority of Documents

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 1.5 Priority of Documents	<p>Delete sub-items (a) to (i) and insert the following sub-items (a) to (j):</p> <ul style="list-style-type: none"> (a) the Contract Agreement (if any), (b) the Letter of Acceptance, (c) the Letter of Tender, (d) the Particular Conditions - Part A, (e) the Particular Conditions - Part B,
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	<p>(f) these General Conditions,</p> <p>(g) the JICA Standard Safety Specification (JSSS) and the signed Bidder's Declaration,</p> <p>(h) the Specification,</p> <p>(i) the Drawings, and</p> <p>(j) the Schedules and any other documents forming part of the Contract.</p>
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Included to avoid the discrepancy that exists with the Contract Agreement where this is also referred to (see below).

C10. Listing of Documents to be included in the Contract Agreement:

Part 3 - Conditions of Contract and Contract Forms, Section IX. Annex to the Particular Conditions - Contract Forms

<p><i>[Option A: One-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p>In paragraph 2. delete sub-items (i) to (ix) and insert the following sub-items (i) to (x):</p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Bid; (iii) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (iv) the Particular Conditions; (v) the General Conditions; (vi) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (vii) the Specification; (viii) the Drawings; (ix) the completed Schedules; and (x) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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and:

<p><i>[Option B: Two-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p>In paragraph 2. delete sub-items (i) to (x) and insert the following sub-items (i) to (xi):</p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Technical Bid; (iii) the Letter of Price Bid; (iv) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (v) the Particular Conditions; (vi) the General Conditions; (vii) the JICA Standard Safety Specification (JSSS)
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	<p>and signed Bidder's Declaration;</p> <p>(viii) the Specification;</p> <p>(ix) the Drawings;</p> <p>(x) the completed Schedules; and</p> <p>(xi) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.</p>
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ANNEXES TO PART C: AMENDMENTS TO “JICA STANDARD BIDDING DOCUMENTS”

Annex C.1: Checklist of Particular Safety Requirement in Technical Specifications

MD to develop this listing basically to create a simple yes/no check that required safety items have been addressed in the preparation of the Bidding Documents.

The list will be prepared after the later specification sections have been received from NK and have been reviewed by MD.

It is suggested that this listing be completed by the Executing Agency and submitted by them as a separate simple listing at the same time as the draft Bidding Documents are submitted for the concurrence of JICA.

Annex C.2: Form BSD – Bidders Safety Declaration

Form BSD:

Bidders Safety Declaration

I, [insert name and position of authorised signatory], being duly authorized by [insert name of Bidder/members of joint venture (“JV”)] (hereinafter referred to as the “Bidder”) to execute this Form-BSD hereby declare our commitment to comply with the requirements of the JICA Standard Safety Specification (JSSS).

I further declare on behalf of the Bidder, that if selected to undertake the Works in connection with the Contract, we will ensure that the Site is established and maintained as a healthy and safe workplace for the Employer’s Personnel and the Contractor’s Personnel and any other persons entitled to be thereon or that may be affected by operations thereby and that the Bidder is aware and accepts to follow all of the relevant health and safety Laws of the Country and the requirements of JSSS.

Irrespective of any Laws of the Country and the enforcement or otherwise of same, the Bidder hereby declares that he has given full and careful consideration, fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor’s Equipment, Personal Protective Equipment, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder further declares that all Works shall be carried out under the control of our qualified and expert health and safety management and where not available in the Country, we will import for sole use upon the Works:

1. New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for purpose and all to meet with the approval of the Engineer in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged?.
2. New or recent Contractor’s Equipment (not more than 5 years old unless otherwise pre-inspected and approved by the Engineer) all fit for purpose, in full working order, safe, clean, non-polluting, complete with all necessary spare parts and consumables and suitable for use on the Works, and

... that all of the above will be used for the purpose intended.

The Bidder further declares that he shall find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.

The Bidder further declares that he (and any of his Subcontractors) shall:

1. Employ workers with appropriate skill, qualification and capability,
2. Fully inform workers about hazards,
3. Provide health and safety training to all Contractor’s Personnel and Employer’s Personnel in a language and vocabulary they can understand.
4. Keep accurate records of work-related injuries and illnesses.
5. Perform tests in the workplace, such as air sampling as required by JSSS.
6. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.
7. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.

8. Provide eyesight, hearing and mobility examinations and other medical tests required by JSSS.
9. Post injury and illness information and data where workers can see them.
10. Inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than 24 hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
11. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidders Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if he is successful with his Bid, the Health & Safety Officer at Site, named below and also included in Bidding Forms, Form PER -1: Proposed Personnel, unless otherwise stated in the Bidding Documents, shall be assigned from the Commencement Date, full time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If our Bid is accepted we agree that this Declaration together with all other documents comprised in our Bid Safety Plan shall form a part of the Contract, at and from which time all references to “Bidder” shall be construed as references to “Contractor”.

Signed:

(Bidders Official Representative)

Name:

Date: _____

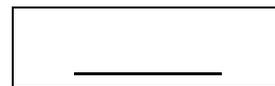
Signed:

(Bidder’s Proposed Health and Safety
Officer at Site)

Name:

Date: _____

Clean copy with comments only



JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA



***Japan International Cooperation Agency
(JICA)***

_____, 2020

Prepared: DCI for NK
Issue: 3
Revision:
Date: 01/09/2019

NK please note that the following is a basic suggestion that requires your further study and legal review with appropriate revision/correction. The disclaimer is based in part on the FIDIC Documents

ACKNOWLEDGEMENTS

JICA have made reference to other publications during the preparation of this document and parts of such other publications may have been used in the preparation hereof. JICA acknowledges and gives credit to relevant sources and expresses its gratitude to such other sources and publications which include:

1) *Japanese Acts, Orders and Ordinances including:*

Industrial Safety and Health Act

Order for Enforcement of Industrial Safety and Health Act

Ordinance on Industrial Safety and Health

Safety Ordinance for Cranes

Ordinance on Safety and Health of Work under High Pressure

Ordinance on Prevention of Anoxia, etc.

Ordinance on Prevention of Hazards Due to Dust

Explosives Control Act

Order for Enforcement of Explosives Control Act

Ordinance on Explosives Control

2) *“OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A..*

3) *Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.*

4) *Conditions of Contract for Construction For Building And Engineering Works Designed By The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)*

DCI - I think it better if this is included as FIDIC second edition has been used (copied) in Part C for GC4.8.

DCI: NK - Please confirm as above and insert further items as necessary to make this list comprehensive)

NK: we will do later.

DCI: Can we please discuss later; has the exact text of the above documents been used as this is this Acknowledgement? In English versions?

DISCLAIMER

JICA has prepared and issued this document in good faith for the reference of executing agencies, contractors and project teams engaged under the Japanese ODA programme, to encourage the attainment of a higher standard of health and safety management on its construction projects. JICA, (together with its consultants and other assistants engaged in the preparation hereof) will not accept or assume any liability or responsibility for any events or the consequences thereof deriving from the use of this document. The document is provided without any express or implied warranty, including without limitation, warranties of accuracy, completeness, fitness for purpose, in general or on particular projects and non-infringement. This document is intended to provide general reference and shall not be relied upon as a specific legal source or reference.

JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

DCI: Please note that all numbering is to be checked and all descriptions to be coordinated and changed in future.

If numbers are not used, explain why (e.g. Future issue etc.)

Chapter	Section	Description
Employer's declaration		-
1. General Requirements	Part A	Preamble Notes
	Part B	JICA Requirements
	Part C	Required Amendments to “JICA Standard Bidding Documents”
2.General Safety Measures	2.1	Work Environment
	2.2	Protection of Third Parties from Danger around the site
	2.3	Dangerous and Hazardous Areas
	2.4	Spotters and Flagmen
	2.5	Fall Prevention/Protection
	2.6	Falling objection
	2.7	Measures against extraordinary weather
	2.8	Fire prevention
	2.9	Nil Maybe PPE
	2.10	Safety site management
		2.10.1 Information to Workers
		2.10.2 Appointment of Operation Leader Maybe transfer to Chapter 1
		2.10.3 Duty of the Operation Leader Ditto
		2.10.4 Life saving equipment for Works on Water
		2.10.5 PPE Maybe transfer to 2.9
3. Underground objects and Overhead power lines	3.1	Underground objects
	3.2	Overhead power lines
4 Construction Equipment	4.1	General requirement
	4.2	Operation
	4.3	Transportation
	4.4 to 4.5?	4.4&4.5 will not used but 4.6 will be 4.5. (If so what is 4.4??)
	4.5	Rental equipment
5. Transportation	5.1	General
	5.2	Truck
	5.3	Conveyors
6. Lifting and Sling Works		-

	6.1 General	
	6.2 Lifting works	6.2.1 Mobile cranes
		6.2.2 Other Cranes
	6.3	6.3 1. Lifting and Slings
7. Temporary Works	7.1	General
	7.2	Earth retaining and support earthworks??
	7.3	Coffering
	7.4	Scaffolding
	7.5	Walkway
	7.6	Work stages
	7.7	Temporary equipment
	7.8	Power facilities
	7.9	Welding works
8. Earth Works	8.1	General
	8.2	Manpower excavation
	8.3	Machine excavation
	8.4	Embankment
	8.5	Blasting
9. Foundation works	9.1	General
Why separate? Covered by 8 and 10 surely unless only Piling NK: Earth works and piling works are different, so they are separated. MD Review later	9.2	Precast piling — in situ??, bored??
	9.3	Machine excavation foundation In-situ piling
	9.4	Open caisson and deep well foundation Earthworks?
		Basements and waterproofing
10. Concrete Works	10.1	Reinforcement Reinforcing bars works
	10.2	Formwork
	10.3	Concrete works in-situ/ precast/prestressed?? - Not yet determined by JICA to include precast/prestressed
11. River Works Diving works (Title will be reconsidered later.)	11.1	Diving works NK: Most dangerous works only will be specified.
		Coffer dams?? The 1 st stage JSSS will not specify other than diving works.

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

PART A: PREAMBLE NOTES

A1. Purpose and Objective:

The Japan International Cooperation Agency (hereinafter referred to as “JICA”) require that all parties engaged upon their ODA Projects shall endeavour to establish and maintain a culture and environment where health and safety is of the highest priority. The common goal shall be to achieve a zero accident rate, adopting the slogan of “Safety First”.

To assist with this objective, JICA have prepared and published this Standard Safety Specification (hereinafter referred to as “JSSS”), which they aim to be adopted for future selected Projects by the Executing Agency for such Projects.

A2. Effectiveness

JSSS has been published on-line by JICA and it shall become effective and be incorporated by Project executing agencies in the Bidding Documents (and therefore the Contracts) for particular Projects on the date that the Loan Agreement (LA) for that Project has been executed and where the parties to such LA have formally agreed to adopt JSSS as the technical basis for Health and Safety management on that Project.

It is not intended to include or attach a hard copy of JSSS to Bidding Documents or the Contract for respective Projects but a copy of JSSS shall be available on the JICA’s web site shown below:

[http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/_____](http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/)

A3. Incorporation of JSSS into Contracts

JICA require that the Employer, Engineer and Contractor will each print a hard copy of JSSS for their own reference and use and that all of these entities shall fully inform their personnel, Subcontractor’s, sub-consultants, other all parties who are associated with the particular Project of the existence, content and purpose of JSSS and the objectives thereof.

Reference to JSSS and incorporation of the required amendments into the Bidding Documents for any Project and reference to JSSS on the website will be sufficient to deem incorporation of JSSS into the Contract for that Project.

Unless otherwise agreed by JICA and the executing agency of currently on-going JICA funded Projects and between the Employer and Contractor(s) on those Projects, this JICA Standard Safety Specification shall not be applied to such Projects.

Further updates and revisions to JSSS unless otherwise agreed with the Employer will be applied to new Projects from the date that such updates and revisions are published on line.

Such further updates and revisions shall not be applied to on-going JICA funded Projects unless otherwise instructed by the Engineer through the issue of an appropriate Variation under GC13.1.

In order that JSSS shall become an integral part of the Bidding Documents for particular Projects and so that the requirements can therefore be implemented immediately after online publication of this document, the particular instructions for alteration of the Bidding Documents by Project employers and consultants are contained within this document in Part C of this Chapter 1: General Requirements. After making such modification to Bidding Documents for particular Projects, JSSS shall be read and construed as a part of the Bid and therefore the Contract for that Project.

It is the ultimate intention of JICA to formally update the separate “Standard Bidding Documents under Japanese ODA Loans” by incorporating the same instructions however in the meantime relevant changes shall be made in accordance with this Standard Safety

Specification.

A4. Compliance and General Obligations

JSSS shall not limit a contracting party's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of Contracts.

Compliance with the JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.

Contractors shall ensure that all health and safety hazards and risks are properly identified, assessed, controlled and evaluated prior to commencement of any work. Only suitably qualified, fit and competent persons may perform the construction activities.

Where the Laws of the Country so state, the Health and Safety Officer (as defined herein) shall be qualified and legally registered as such in accordance with such Laws.

Similarly JSSS shall not limit the Contractor to the scope contained herein.

All Parts (A, B and C) of this Chapter 1: General Requirements are to be read and construed collectively as integral parts of JSSS and therefore constitute integral parts of the Contract for the Project.

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

PART B: JICA REQUIREMENTS

1.1 Employer's Safety Declaration

By entering into a Contract, the Employer (together with the Engineer acting as his consultant) declares that he shall collaborate in good faith with the Contractor and take all reasonable measures within his authority and under his control to promote the highest achievable health and safety standards in the execution of the Works all in accordance with his contractual and statutory responsibilities and adopting the slogan:

“SAFETY FIRST”

The Contractor shall aim to achieve “Zero Accident” in the execution of the Works taking full responsibility for the health and safety management of the Works, adopting JSSS that specifies the minimum safety requirements that the Contractor shall implement.

A Bidder's Safety Declaration has been prepared and is included in Part C of this Chapter 1: General Requirements.

1.2 Definitions, Abbreviations and Standards

1.2.1 The following words and expressions in JSSS relating to the Conditions of Contract and the content of this Chapter 1 shall have the definitions stated:

- (1) **“Executing Agency”** means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and defined in the Contract as the Employer.
- (2) **“GC”** and **“PC”** followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) **“Health and Safety Officer”** or **“HSO”** means the Contractor's health and safety officer at Site to be appointed by the Contractor in accordance with PC6. 7 [*Health and Safety*] and named by the Bidder in his Bid.
- (4) **“JSSS”** or **“JICA Standard Safety Specification”** means the document of this title published officially by JICA on their website, issue number __ dated ____ and as may be modified by the Bidding Documents for the Project.
- (5) **“Method Statement”** means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in PC4.1 [*Contractor's General Obligations*].
- (6) **“OSHA”** means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A..

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

Unless otherwise evident from the text, reference in OSHA to “team leader”, “on-site supervisor”, “On-site supervision”, “Field superintendent”, “work chief” and the like shall be collectively construed as reference to “the Contractor's Representative” and reference to the “safety and health manager of the Contractor” and the like shall be collectively construed as reference to the Contractor's “Health and Safety Officer”. “The construction plan and safety and health plan”, shall be construed according to the

terms for such similar documents required by the Contract.

If any ambiguity or discrepancy is found in the OSHA documents specified in JSSS, or if any difference or discrepancy is found between OSHA documents and JSSS, the Engineer shall issue any necessary clarification or instruction.

- (7) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the agreement with JICA and utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (8) “**Safety Plan**” means a document that contains the overall risk assessments and shows the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in PC4.1 [*Contractor’s General Obligations*].

“**Safety Plan**” shall also mean “occupational health and safety plan”, “health and safety plan” and “safety plan” all described as such in JSSS and other documents contained in the Contract. ***This may not be necessary if references are consistent.*** The phrase “health and safety” shall be construed as covering “occupational health and safety”.

1.2.2 The following technical words and terms in JSSS shall have the definitions stated:

DCI: This is subject to further development and might ultimately be transferred to a separate Annex

- (1) “**Confined Spaces**” shall mean spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (2) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (3) “**Formwork**” means temporary containment structures for in-situ concrete and its immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (4) “**Hazardous Areas**” means areas defined in Section 2.3 as such.
- (5) “**Operation Leader**” (also known as a “Ganger”, “Leading Hand”, “Foreman” or “Working Foreman” and the like) means a member of the Contractor’s workforce who through experience, internal training and testing is deemed by the Contractor to be qualified to work with and lead the worker’s teams, to direct them in the performance of their assigned duties and ensure their compliance with the Contractor’s safety regulations.
- (6) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level. PPE for PFAS shall comprise of a body harness, an anchorage, connectors and typically shall include a lanyard, deceleration device, lifeline, or suitable combination of these. The use of a Safety Belt for fall arrest systems is prohibited. Wherever PFAS is provided for use, the Contractor shall ensure that it is used.
- (7) “**Personal Fall Restraint System**” or “**PFRS**” means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall. PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and

other devices. Wherever PFRS is provided for use, the Contractor shall ensure that it is used.

DCI: *Above PFRS is recommended but so far not included in JSSS*

- (8) “**Safety Belt**” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard, lifeline or deceleration device. Any safety belt that has actually been subjected to a fall or previous in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for the safety of any worker.

DCI: *there is much more to add to this list so it is complete and the order of above and new items will be rearranged in alphabetical order. I will add to this successively as we receive and edit later sections and draft appropriate definitions.*

1.2.3 The following Sub-Clauses relate generally to the above definitions and to those already contained in the Contract:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) Any reference to “Contractor” within this document shall also be deemed to include “all Subcontractors”, for whom the Contractor shall remain fully responsible.
- (3) Unless otherwise evident from the text, any reference to the Contractor’s responsibilities for “Safety” in this documents shall also be construed as reference to “Health and Safety”.
- (4) Any reference in JSSS requiring the provision by the Contractor of safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of such safety measures for Employer’s Personnel and any other persons that are entitled to be on the Site and other places (if any) where the Works are being executed.
- (5) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction For Building and Engineering Works Designed by the Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

1.2.4 The following abbreviations of technical terms shall have the meanings stated:

DCI: *This is subject to further development and may ultimately be transferred to a separate Annex*

PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings

1.2.5 The following abbreviations of standards, codes and the like shall have the meanings stated:

DCI: *This is subject to further development and may ultimately be transferred to a separate Annex*

ANSI	American National Standards Institute.
ASTM	American Society for Testing and Materials.
BS	British Standard.
BSEN	British Standard European Norm.
ISO	International Organization for Standardisation.
JIS	Japanese Industrial Standards.

1.3 Application to Grant Aid and other Projects

- 1.3.1. JSSS has been drafted to apply to JICA ODA Loan Projects and to the relevant FIDIC harmonised form of Contract for such Projects as referred to in 1.2.3 (4) above.
- 1.3.2. JSSS shall also apply to other JICA assisted Projects that have been awarded under different forms of contract including those under Contractor design contracts and contracts under the JICA Grant Aid programme. When so used, suitable modification shall be required to the definitions and text of JSSS and the Bidding Documents for those Projects to ensure compatibility and consistency with the relevant contract requirements for the Project, reflecting the same intentions, standards and procedures for improving health and safety.

1.4 Laws and Reference Standards

The Contractor shall comply as a minimum with the Laws of the Country, including all health and safety standards.

- 1.4.2 If the Employer has formally agreed with JICA to adopt JSSS for the Project, then the requirements of JSSS shall apply as a minimum and these shall prevail over the technical requirements of Laws of the Country without limiting the Contractor's legal duties and obligations under such Laws.
- 1.4.3 Otherwise where the Laws of the Country (including any health and safety standards) are silent on particular health and safety requirements and where provisions are included in JSSS then JSSS shall apply and prevail.
- 1.4.4 JSSS is an abbreviated document and therefore as a general rule, where JSSS contains insufficient or no technical regulations or no detailed requirements then the related technical regulations of OSHA shall apply.
- 1.4.5 JSSS prescribes minimum requirements and the parties are free to include higher standards when so agreed between Contractor, Employer and Engineer.
- 1.4.6 The Contractor shall be deemed to have studied and familiarised himself with the Laws of the Country and to have ascertained if any part of such Laws are superior to any of the particular requirements of OSHA, in which case such particular Laws shall apply and the Contractor shall inform the Engineer accordingly.
- 1.4.7 The reference standards used in JSSS can be substituted with alternative standards after requesting and obtaining the consent of the Engineer who may give such consent only if in his opinion such alternative standards provide an equivalent or higher standard of health and safety than that required by JSSS.
- 1.4.8 Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.5 Contractor's Safety Certification

DCI: *NK: Please confirm if this certification is required and if so is it to be a Bid Qualification requirement (we do recommend that it is). Refer to Part C where I have made this optional*

- 1.5.1. Unless otherwise expressly stated in the Bidding Documents (refer to Chapter 1: General Requirements, Part C, Clause C2. (5)), the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation as determined by the Employer (if to be determined at Bid Evaluation stage) or Engineer (during the implementation stage).
- 1.5.2. If accreditation is required by the Bidding Documents, an original or authorised true copy of the current certification shall be submitted with the Bid and this shall subsequently be included with the Contract.

1.5.3. The Contractor shall submit original or authorised true copies of all current updates to the Engineer when due.

1.6 Safety Plans

1.6.1 The Contractor shall be required to submit the Safety Plan at two stages:

- (1) Safety Plan at Bid Stage.
- (2) Safety Plan at Commencement Stage.

In addition the Contractor shall provide such further updated or particular Safety Plans as may be necessary due to current circumstances or conditions at the Site or as requested by the Engineer in accordance with GC 4/1 [*Contractor's General Obligations*], as amended by this Chapter 1: General Requirements, Part C, Clause C6.

1.6.2 For details of the Safety Plan at Bid Stage, refer to JSSS Chapter 1: General Requirements, Part C, Clause C2 Detail of Safety Plans in Bidding Documents.

1.6.3 For details of the Safety Plan at Commencement Stage, refer to JSSS Chapter 1: General Requirements, Part C, Clause C7 PC4.8.

1.6.4 Particular Safety Plans

DCI: *I recommend that automatic submission of "Particular Safety Plans" is not necessary and has no meaning when the following is considered in conjunction with revised Sub-Clause 4.8 (see Part C, Clause C.7)*

- (1) The Safety Plan (or parts of it) shall be revised or supplemented where considered necessary by the HSO or when required by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*], as amended by this Chapter 1: General Requirements, Part C, Clause C6. Each such revision or update of the Safety Plan hereinafter referred to as a Particular Safety Plan, shall be submitted promptly to the Engineer in any event not less than 21 days before commencing those parts of the Works, such that the Engineer is made aware in writing of at least the following information for all parts of the Work:
 - (a) Work outline, work procedure and order of carrying out the work.
 - (b) Number of Contractor's Personnel
 - (c) Safety management system and responsibility and authority of Contractor's Personnel.
 - (d) Risk assessment.
 - (e) Safety measures.
 - (f) PPE for the Contractor's Personnel.
 - (g) Safety education and training of the Contractor's Personnel and TBM.
 - (h) Teaching materials used in education, training and pre-operation TBM before work.
 - (i) Method of information sharing and communication among the Contractor's Personnel.
 - (j) Implementation and monitoring of measures for health and safety management.
 - (k) Emergency response.
 - (l) Accident relief.

1.6.5 The Contractor shall also consider the opinions of the Contractor's Personnel in preparing all Safety Plans or updated Safety Plans.

DCI: *Not the main plan it is too early, updates yes*

1.6.6 In performing risk assessments the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.

1.6.7 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed of all hazards and risks on the Site.

1.6.8 The procedural flow of risk assessment shall be as follows.

- (1) Identifying hazards.
- (2) Evaluating risks.
- (3) Determining measures of risk reduction.

1.6.9 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:

- (1) Removal of hazards such as eliminating dangerous works.
- (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
- (3) Design/Engineering measures.
- (4) Management measures.
- (5) Use of PPE.

DCI: *NK Please clarify and discuss (3) and (4) within the context of engineer's design.*

1.7 Contractor's Health and Safety Management Staff

DCI: *Health staff?*

1.7.1 Requirements for the HSO:

- (1) JICA require the Bidder to name the HSO in the Bid (and thence Contract) and the Contractor shall assign that named HSO upon the Works, prior to the Commencement Date.
- (2) If the appointed person fails to act as HSO and is removed from the Site of the Works under the of GC6.9 [*Contractor's Personnel*], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of another suitable replacement person to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor and not of a Subcontractor or consultant and unless otherwise stated in the Contract shall be assigned full time upon the Works and his/her responsibilities, authority and duties shall be in accordance with PC6.7 [*Health and Safety*].

DCI: *MD to consider coordination of the above and following with Form BSD*

- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate qualification for such position if required by the Laws of the Country and also (if so required) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall be fluent in the language for communications stated in the Contract as

defined in GC1.4 [*Law and Language*]. The HSO shall preferably also be fluent in the ruling language of the Contract (if different) however it is acceptable for the HSO to use a translator for this language only.

- (7) Where there is no legal requirement under the Laws of the Country for qualification, the HSO, shall have appropriate academic and health and safety qualification, work experience in construction (minimum 10 years) and in health and safety management (minimum 5 years which can be concurrent with construction experience) and whom the Contractor considers is qualified to perform the duties subject to receiving the consent of the Engineer.
- (8) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his/her duties.
- (9) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for HSO including additional managers, assistants and inspectors all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.
- (10) The HSO (where necessary with the assistance of his qualified support staff) shall personally be capable of ensuring that:
 - (a) All working areas of the Site are inspected on a regular basis (at least once every working day) to detect if any unsafe practices or conditions exist.
 - (b) If such unsafe actions, practices or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this not possible then to temporarily stop all construction activity on that part of the Works until such action has been taken.

Such inspections attended by the HSO, may also include the attendance of the safety representative of the Engineer.

1.8 Health and Safety Officer – Scope of Duties

1.8.1 The HSO shall devote his/her full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.8.2 The particular scope of duties of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Work:
 - (a) Preparation of Safety Plans, implementation, evaluation, improvement, revision and submission thereof.
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel.
 - (c) Provision of activity records in progress reports.

DCI: NK please clarify the meaning of the above?

- (d) Constant inspection and implementation of corrective measures for any unsafe conditions at the Site and any unsafe behaviour or practices of the Contractor's Personnel.
- (e) Consultation on safety management with the Employer's Personnel.

- (f) Temporarily stop all construction activity on any parts of the Works in case of accident or the like and informing the Engineer.
 - (g) Responding to accidents, creating and implementing measures to prevent reoccurrence.
 - (h) Reporting and consulting with the Engineer including when an accident occurs or a hazardous situation is likely.
 - (i) Appointment of health and safety inspectors and assistants after obtaining the consent of the Engineer.
- (2) Instructing the Contractor's Personnel ~~and Employer's Personnel~~ to take improvement measures for maintaining health and safety and preventing accidents.
 - (3) Checking the health status of the Contractor's Personnel.
 - (4) Planning and implementation of various training and education implementation plans.
 - (5) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases.
 - (6) Preparing regular internal and external reports on health and safety activities.
 - (7) Hazard prediction activity

DCI: NK for Kiken Yochi: see later clause 1.13.

1.9 Contractor's Health and Safety Committee

1.9.1 The Contractor shall create an internal Safety Committee for the purpose of effective health and safety management.

1.9.2 Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors representatives, health and safety personnel, site staff.
- (7) Representative of Contractor's Personnel including workers on Site.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.9.3 The HSO shall be the chairman of the Safety Committee.

1.9.4 The Contractor shall hold a regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Monthly or weekly schedule of important health and safety matters.
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence.
 - (d) Hazards, safety and health problems resulting from:

- (i) Site inspections by HSO.
- (ii) Issues raised by the representative of Contractor's Personnel.
- (iii) Issues raised by Subcontractors.
- (iv) Issues raised by others.
- (e) Feedback on the regular safety, coordination and other meetings with the Engineer.
- (f) Safety instructions received from the Engineer.
- (g) Items to be coordinated with police, fire department and other related organisations.
- (h) Compliance and registration matters under the Laws of the Country.
- (i) Safety and health awards, media attention and the like.
- (j) Other matters.

1.9.5 Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.10 Engineer's Regular Safety Meetings

1.10.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to make commitments on health and safety matters on behalf of the organisations that they represent:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Monthly or weekly schedule of important health and safety matters
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence.
 - (d) Hazards, safety and health problems resulting from:
 - (i) Inspections by the Engineer and the Employer.
 - (ii) Site inspections by HSO.
 - (iii) Issues raised by the representative of the Contractor's Personnel.
 - (iv) Issues raised by Subcontractors.
 - (v) Issues raised by others.
 - (e) Status of resolution of previous problems.
 - (f) Items to be coordinated with police, fire department and other related organisations.
 - (g) Compliance and registration matters under the Laws of the Country.
 - (h) Safety and health awards, media attention and the like.

- (i) Other matters.

1.10.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer with a further copy provided directly to JICA.

DCI: *Please note above suggestion*

1.11 Project Safety Committee

1.11.1 On larger Projects with multiple contract packages and contractors, if stated in the Bidding Documents for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.11.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.11.3 The Chairman of the Safety Committee shall be the Employer.

1.11.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.

1.11.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

1.12 Health and Safety Coordination with Other Contractors

1.12.1 Refer to GC2.3 and GC4.6 regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer, and
- (3) the personnel of any legally constituted public authorities,

... who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to (1) and (2) above, the Employer shall ensure that such personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC4.8 [*Safety Procedures*] and GC4.18 [*Protection of the Environment*].

In relation to (3) above the Contractor shall ensure that such personnel are fully informed of the Contractor's Safety Plan and shall liaise and agree with such authorities to ensure that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Contractor is therefore required to contact such other contractors directly and liaise with them

to obtain all such other information and incorporate this into the Safety Plan.

When risks arise because of potential interactions between the Contractor and other contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Contractor shall take a positive role in ensuring the general principles of risk prevention and control are applied amongst all contractors involved.

1.12.2 The Bidding Documents shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.12.3 If the above circumstances apply, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement.
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities.
 - (c) Accidents, injuries and measures to prevent any reoccurrence.
 - (d) Status of resolution of previous problems.
 - (e) Items to be coordinated with police, fire department and other related organisations.
 - (f) Compliance and registration matters under the Laws of the Country.
 - (g) Safety and health awards, media attention and the like.
 - (h) Other matters.

1.12.4 Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven days after the meeting.
- (3) A further copy shall be included in the Engineer's monthly progress report.

1.13 Contractor's Health and Safety Management Activities

1.13.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.13.2 Health and safety management activities shall include (but are not limited to):

- (1) Overall Management Activities:
 - (a) Tasks of the Health and Safety Officer as described above.
 - (b) Arranging, chairing, attending meetings as described above and other internal contractor meetings including TBM.
 - (c) Attending pre-work meetings, pre-start meetings, schedule meetings.
 - (d) Monitoring the implementation of the Safety Plan.

- (2) Management of Contractor's Personnel:
- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, toolbox meetings, providing general advice and instruction, specific instructions on individual works, safety confirmations, information to be conveyed etc.
 - (b) Instruction and management of traditional Japanese cleanliness safety campaign known in Japan as **5S ACTIVITIES** where:
 - Seiri = sorting
 - Seiton = tidying
 - Seiso = cleaning
 - Seiketu = cleanliness
 - Shituke = discipline
 - (c) **KIKEN YOCHI TRAINING (KYT)** for hazard prediction training usually in TBM, where:
 - K = kiken (hazard)
 - Y = yochi (prediction)
 - T = training
 - (d) Instruction and management of safety education and training.
 - (e) Instruction and management of various safety measures.

1.14 Monitoring

1.14.1 The Contractor shall develop and implement systems to ensure that compliance with the Safety Plan is monitored efficiently and transparently at all times, for which purpose the Contractor shall:

- (1) Create checklists for monitoring.
- (2) Carry out regular and irregular inspections.
- (3) Monitor failed, unsafe or non-compliant conditions.
- (4) Create files and safe storage systems for the monitoring records.
- (5) Copy all relevant information to the Engineer as requested by the Engineer.

1.15 Joint Site Safety Inspections

1.15.1 In addition to the Contractor's own daily Site Safety Inspections described above, the Contractor shall also conduct regular Joint Site Safety Inspections with the Engineer or (if appointed) the safety representative of the Engineer. Respective safety staff may also attend.

1.15.2 Frequency of Joint Site Safety Inspections shall be at least once a week.

1.15.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.

1.15.4 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.16 Engineer's Safety Representative

DCI: (NK what is the future intention? Will a safety engineer be appointed in future on all Projects or will the Engineer act in this capacity? This may require revision of the Guidelines for the

Employment of Consultants under Japanese ODA Loans.

This requires further discussion with JICA.

It may require a more detailed procedure, the following is an outline suggestion only This requires further coordination and development with other sections (e.g. scaffolding) so that joint safety and certification and “safe for use” procedures can be implemented if required) without affecting the Contractor’s overriding responsibility.

Please refer to Part C where I have made further reference.

I understood that JICA wanted the Engineer to somehow play a more proactive role so would like to discuss this with you to ascertain the future intentions.

- 1.16.1 On large Projects, the Engineer may appoint an assistant under GC3.2 to be known as the Engineer’s Safety Representative (ESR) and who shall be responsible for health and safety within the Engineer’s organisation on Site and for monitoring the Contractor’s compliance with the each contractor’s Safety Plan.
- 1.16.2 By written notice served under GC3.2, the Engineer shall delegate authority to the Engineer’s Safety Representative to represent the Engineer in matters of health and safety at Site, to issue written instructions to the Contractor on matters of health and safety and monitor compliance with such instructions which shall include:
- (1) Instructions requiring the Contractor’s compliance with the Safety Plan.
 - (2) Emergency instructions to Contractor to stop working where the Engineer observes accidents, near misses or unhealthy or unsafe conditions.
 - (3) Instructions requiring the Contractor to change the working methods at the Site to improve health and safety.
- 1.16.3 The Engineer’s Safety Representative shall cooperate and work closely with the HSO and will represent the Engineer on Joint Site Safety Inspections and also undertake independent and regular inspections of the Works at the Site.
- 1.16.4 The Engineer’s Safety Representative shall give safety compliance instructions to the Contractor in accordance with his/her delegated authority under GC3.3.
- 1.16.5 The Contractor shall take corrective action within the time limit prescribed in the instruction, shall keep the Engineer’s Safety Representative fully informed on progress and shall report in writing when the corrective action is completed.
- 1.16.6 If the Bidding Documents state that the appointment of a full-time or part-time Engineer’s Safety Representative is not required (refer to JSSS Chapter 1: General Requirements, Part C), it is to be assumed that the Engineer shall act in this capacity.

DCI: Communications require more thought and definition. Who is to issue and receive? Can be direct HSO and ESR?

NK: The ESR may be assigned as Full-time or concurrent safety supervisor. The Employer always hesitate to assign foreign safety expert because of cost. For enforcing JSSS, it needs experienced and competent safety engineer.

DCI: Can we please discuss further so I can understand what you want to do.

NK: All correspondence shall be made between the Contractor and the Engineer, not HSO and ESR as usual.

DCI: There may be a requirement for direct (urgent) communication on some safety issues.

1.17 Safety Statistics

1.17.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.17.2 Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, casualties, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes of them.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff, contents, frequency, participant, duration of safety education at site and safety event.
- (9) Others.

1.17.3 All data shall be in a format and content format and content to be approved by the Engineer.

1.17.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.17.5 The data shall subsequently be compiled and included in the Monthly progress report.

1.18 Safety Reports

1.18.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, improvement.
- (2) Joint Site Safety Inspections.
- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report can be submitted as an attachment to the Contractor's monthly progress report.

1.19 Health and Safety Records

1.19.1. The Contractor shall keep the health and safety records for the following:

- (1) Accidents, fatalities, near-misses.
- (2) Meetings for safety and health management.
- (3) Monitoring of safety and health management activities.
- (4) Health and safety education and training for the Contractor's Personnel.
- (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.

1.17.6 All records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer.

1.20 Proper Placement of Contractor's Personnel

1.20.1 Further to compliance with GC6.9, the Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.

The HSO shall countersign all such records to indicate his/her confirmation of the suitability of each member of the Contractor's Personnel prior to their placement.

These records shall be made available for inspection by the Engineer.

1.20.2 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor in consideration of:

- (1) Work content and work environment.
- (2) Work experience, qualification and capability.
- (3) Health condition upon commencement of employment.
- (4) Health condition on a regular basis before daily work starts.
- (5) Allocation of an achievable and safe work volume.
- (6) Allocation to workers under 18 in accordance with GC6.21.

1.21 Placement and ID of Personnel for Works Requiring a License

1.21.1 If for any of the operations at Site, the Laws of the Country require operating, supervising or any other Contractor's Personnel to have a licence, particular qualification, registration or certification the Contractor shall ascertain that all such Contractor's Personnel possess and maintain such documentation.

1.21.2 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and shall independently test all personnel to ascertain that they do possess sufficient knowledge, qualification and skills.

1.21.3 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that he resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site unless otherwise approved by the Engineer and assigning a suitable replacement.

1.22 Health and Safety Education and Training

1.22.1 The Contractor shall conduct health and safety education and training for all of the Contractor's Personnel.

1.22.2 The Contractor shall include in the Safety Plan the outline of the education and training plans (participants, time, teaching materials, policy of selecting educators and trainers). In addition, the Contractor shall submit full details of such education and training to the Engineer for his information before the start of such education and training.

1.22.3 Education and training shall be provided free-of-charge to the trainees, conducted during normal working hours, trainees shall be paid and the Contractor shall bear all necessary expenses.

1.22.4 Safety induction: For general education and training of new entrants upon the Site and those who are scheduled to change work type, skill or location, the following subjects shall be included:

- (1) Chain of command and means of communication for the work.
- (2) Hazards or dangers due to the use of machinery, equipment, raw materials, etc., and methods of dealing with such hazards or dangers.
- (3) Performance and handling methods of safety devices and PPE with practical on-Site demonstration.
- (4) Hazardous substance control devices with practical on-Site demonstration.

DCI: - to be coordinated later

- (5) Working procedures generally.
- (6) Inspection before starting any work.
- (7) Maintaining an orderly, tidy and clean Site.
- (8) Emergency measures and evacuation at the time of accidents, etc.
- (9) Health and safety rules.
- (10) Causes and prevention of diseases that may occur in relation to the work concerned.
- (11) Other matters necessary for health or safety related to the work concerned.

1.22.5 For education and training of Contractor's Personnel who are planned to be assigned to dangerous or harmful work (for example as listed in Annex 2), such Contractor's Personnel shall be given the same general education and training as above plus further special education and training pursuant to the work in which such Contractor's Personnel are to be engaged.

NK: Dangerous and harmful works here can be limited to those in Annex 2, not such dangerous works with hand tools.

The intention of this clause is to clarify works that needs special knowledge and skill, which are specified in Japan.

DCI: Can we please discuss further as whilst I understand that there are specified training requirements in Japan these are different outside Japan.

Please also refer to our comments on Annex 2

The Contractor shall determine the educational subjects and teaching hours for the special education and training *with reference to Annex 3*.

Special education for the work concerned may be omitted in full or in part for any Contractor's Personnel who the Contractor has ascertained, holds valid qualification issued by an acknowledged public organisation of the Country and who has finished comprehensive training by the public organisation of the Country or acceptable training in another country and whom the Contractor ascertains as having equivalent and sufficient knowledge and skills for all or part of the special education.

1.22.6 For education and training of Contractor's Personnel who are to be appointed as Operation Leaders *(for example as listed in Annex 4 and 5)*, such personnel shall be given the same general education and training as above plus further special education and training pursuant to the work in which such personnel are to be engaged.

The Contractor shall determine the educational subjects and teaching hours for the skill-

training course with reference to Annex 5.

Special education for the work concerned may be omitted in full or in part for any Contractor's Personnel who the Contractor has ascertained, holds valid qualification issued by an acknowledged public organisation of the Country and who has finished comprehensive training by the public organisation of the Country or acceptable training in another country and whom the Contractor ascertains as having equivalent and sufficient knowledge and skills for all or part of the special education.

DCI: *NK – This requires further clarification and discussion*

1.22.7 Education and training personnel

Educators and trainers can be Contractor's Personnel who are experienced, academically qualified and (if legally required) registered as educators and trainers under the Laws of the Country, fluent in the language of the Country or external educators and trainers similarly qualified, registered and fluent.

In case of absence of availability of such suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary qualification, ability and experience, subject to receiving the advance consent of the Engineer.

1.22.8 Records of education and training

The Contractor shall create and store records of trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.22.9 Explanation of health and safety rules to persons other than the Contractor's Personnel

The Contractor shall provide general health and safety education courses to the Employer's Personnel and to any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed

1.23 Emergency Response Plan

1.23.1 The Contractor shall prepare an Emergency Response Plan as a part of the Health and Safety Plan in order to promptly and appropriately respond to natural disasters, fires, and other emergencies that may occur during construction.

DCI: *NK please note:*

Natural disasters include typhoons, earthquakes etc. which are actually GC19 Force Majeure situations for which, the contractor is not responsible and he has no obligation to give any such automatic "response".

What is the actual required extent of the Contractor's "response"? What manpower and equipment is he to provide? How can this be predicted and estimated?

What about the Employer's and Engineer's own plans and what about the availability of the rescue services etc. in the Country?

These arrangements appear to be onerous upon the Contractor and of not properly worded may cause difficulty with interpretation of force majeure.

Can we please discuss and consider this further to understand the purpose and intention.

We have edited the following to make it readable but do not agree with the content.

NK: *We specified for the natural disasters which is not GC19 Force Majeure situations. We expect the Contractor to prepare the natural disaster which may be occurred by the weather or earthquake of magnitude between bad weather and earthquake, and Force Majeure situations. The bad weather and earthquake are specified in JSSS 2.7 Measures against Adverse Weather and Earthquakes, which I want to send it in English you soon.*

DCI: *I will wait to receive your document on this subject so I can understand your intentions.*

In addition, the Contractor shall fully inform the Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed, of the detail of the Emergency Response Plan. The Contractor shall also establish an emergency call system and carry out training based on the Emergency Response Plan.

The Emergency Response Plan, shall include the following items:

- (1) Expected types of emergency situation.
- (2) Description of the emergency call system.
- (3) Explanation of the specific measures for emergency response.
- (4) Measures for quickly establishing locations of affected Contractor's Personnel, defining assembly points and the like.
- (5) Provisions for immediate changes and revisions to be made in response to changes in the Site situation

The Emergency Response Plan shall be submitted to the Engineer as part of the Safety Plan and be updated as necessary throughout the Time for Completion of the Works.

1.23.2 The Contractor shall establish an emergency call communication system that will require confirmation from all contact official departments, organisations and persons ~~even~~ in the event of an emergency. This shall include the creation of an emergency contact list, which shall be posted it in a visible location such as the Contractor's Site office to inform all Contractor's Personnel.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel.
- (2) Relevant government authorities and agencies: administrative agencies, police stations and fire stations etc.
- (3) Contractor's Personnel at the Site.
- (4) Other contractors engaged upon the Site or the Works

1.23.3 The Contractor shall conduct emergency response training based on the Emergency Response Plan which shall include:

- (1) Implementing a training programme at least every six months
- (2) Improving the emergency response plan based on training results
- (3) Providing details of the emergency response

The Contractor shall provide training for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed

Details of the training shall be included in the Emergency Response Plan and Safety Plan.

1.23.4 If and when an emergency occurs during the Time for Completion, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.23.5 The Contractor shall take measures such as the placement and installation of the following accident relief facilities and equipment, medical personnel, ambulances, etc.

DCI: NK please see above queries, the Contractor usually has no such obligations for force majeure events, so if this is required it must be fully specified and paid for. Usually only the use of existing site facilities is allowable technically in accordance with the Engineer's Instructions (and payment by Employer).

NK: As I explain above, the Contractor shall prepare the plan for predictable weather, earthquake and others from the Contractor's experience.

DCI: This may complicate interpretation contractually where force majeure has accepted definition. In most countries earthquakes are not so common and extreme weather likewise.

Please can we discuss

DCI: We assume that the following described in the draft as "Emergency Relief Plan" actually means a plan for dealing with common accidents on the Site. This heading is a little misleading, I suggest change to something like "Accident Relief Plan" so there can be no confusion with "Emergency Response Plan"

1.24 Accident Relief Plan

1.24.1. The Contractor shall prepare an Accident Relief Plan in consideration of the nature and timing of the Works and the location(s) of the Site and taking account at least of the minimum facilities and measures to be provided in accordance with the Specification for the Contract (refer also to JSSS Chapter 1: General Requirements, Part C) and including:

DCI - To be coordinated with Part C and Health

- (1) Availability of medical personnel who can provide first aid and additional medical assistance.
- (2) Availability of vehicles and drivers that can properly transport casualties to clinics on Site or hospitals off the Site.
- (3) Establishment of first aid room, clinic or like facilities on Site with equipment and consumables.
- (4) Arrangement of communication facilities and measures for emergency response.
- (5) Deployment of appropriate first aid appliances, aids, instruments and medicines.
- (6) First aid training, appointment of first aiders and dissemination of information.

It is to be noted that JSSS Chapter 1: General Requirements, Part C, lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.

1.25 Measures at the Time Accidents Occur

1.25.1. When an accident occurs, the Contractor shall immediately discontinue the work task and implement the following measures as necessary.

- (1) Safely locate and extract casualties and provide first aid and other accident relief measures
- (2) Secondary accident prevention activities
- (3) Preserve the accident site, make safe and prevent anyone interfering or entering

- (4) Discontinue construction work related to or in the vicinity of the accident
- (5) Implement any further measures instructed by the Engineer

1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident or illness in accordance with PC4.8 [*Contractor's Health and Safety Obligations*]

DCI: NK, can we please attach an accident report form now? As an appendix, please let me have a draft and I will include

- (2) Having investigated and established the cause of any accident or illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures to prevent any reoccurrence.

1.25.3 Procedures for Resumption of the Works

Unless otherwise instructed by the Engineer, the procedure for resuming the Works after the occurrence of an accident or illness shall be as follows.

- (1) Contractor examines and formulates measures to prevent any reoccurrence and submits a description of such measures to the Engineer.
- (2) The Engineer may review the preventive measures.
- (3) The Contractor informs the Engineer with no less than two working days notice that he will resume the Works when he is ready to implement the preventive measures and restart such Works.
- (4) The Contractor resumes the Works.
- (5) The Contractor verifies the effectiveness of his preventive measures and informs the Engineer.
- (6) The Contractor implements risk assessment and revises the Safety Plan and Method Statements as necessary.

DCI: NK, please review and discuss the above carefully

1.26 Health Issues

DCI: What about health issues? The document is largely silent on this yet statistically this is the biggest problem

NK: May I know what kind health issues you commented. We specify health issues such as dust, noise, heat are specified in JSSS 2.1 Working site environment.

NK: Do you mean if the health issues are asbestos, dusts including silica and lead, chemicals, sunlight, diesel engine exhaust emissions, frequent loud noise, frequent or excessive use of vibrating tools, frequent or excessive manual handling of loads, stress and fatigue.

DCI: Yes in part answer to your question and also health issues at Site in terms of what shall be provided as a guide and also:

Contractor should provide (or ensure) eyesight and hearing exams that do have a significant effect on safety and other mobility and medical tests that are reasonable, all to be stated in JSSS.

We should not rely on local Laws but should stipulate health requirements to make sure that the contractor complies with this.

This will also require the Contractor to assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.

NK: *We specify in 2.1 about dusts, noise and temperature. We do not specify about asbestos because the Laws of the country may have specified already and ODA projects may not handle asbestos except renovation works.*

DCI: *We surely cannot rely on local laws that in general JSSS is aiming to improve.
Renovation works occur frequently*

NK: *Do you have any suggestion about health issues?*

DCI: *See above.*

This also requires research of other standards but what about medical facilities on Site, medical tests and also treatment of endemic diseases in certain countries. AIDS is covered in FIDIC (although not so necessary now perhaps) but what about others? Malaria nets, dengue patrols (Singapore style) etc. etc..

Also state criteria for provision of facilities at Site for example say related to the distance from Site to the nearest hospital. If say more than one hour provide a doctor(s) full time plus medical support plus nurses and reasonably equipped ambulance with driver.

Plus also same doctor and nurses may be able to provide a local JICA clinic?

All of the above requires coordination with GC6.8 but more clarity will be helpful as the present clause is frequently not applied properly.

Can we discuss further please, noting that this should really come from NK.

What do the Japanese regs. require?

The documents need to be comprehensive and helpful.

NK: *JSSS will be prepared at 2 stages. The 1st stage JSSS will cover the following table for basic and essential safety requirement and the 2nd stage will do for safety in sectors of road, river, tunnel, railway, etc.*

DCI: *Please can we discuss later, I am not sure if or how your ideas for later issues will work.*

1.27 Temporary Works

DCI: *The following are draft notes which in the main will probably be transferred and dealt with later in JSSS Chapter 7.1 but some reference may be necessary here.*

Please leave this here for now and we will coordinate this (and other parts) later. There is cross-reference to this clause in Part C.

NK: *I will send you 7.1 as soon as possible JICA gave us their draft of JSSS.*

DCI: *Please note that I have not changed any part of the following paragraph (except as highlighted in green) as I am waiting receipt of your further draft.*

The Contractor shall provide details at Bid stage (not calculations necessarily at this stage?) of all Temporary Works (TW) designs including Falsework for significant structures as listed in the Bidding Documents (refer to JSSS Chapter 1: General Requirements, Part C) and including for example:

- (1) Falsework equal to or higher than 3.5 m.
- (2) Overhead passage equal to or higher than 10m (bridge?)
- (3) Scaffolds ("scaffolding"?) equal to or higher than 10m can engineer check scaffolding design?.
- (4) Other TW specified in the Contract or instructed by the Engineer.

DCI: NK can we please discuss the above to clarify these and further requirements after which we will delete or re-word this

What about other items such as TW for major bridge structures, tunnels, coffer dams, temporary dams, etc. ??

What is the Engineer required or intending to do with such information?

NK: The Engineer can review design document by the Engineer's design expert if he is assigned. If not, the Engineer shall review the design procedure and designs with his experience of TW.

DCI: We suggest that this could be dangerous as reliance needs to be placed upon the Contractor's specialists not the Engineer. The check (if any) should be to ascertain that the Contractor has engaged and used such specialists. The Engineer does not (and should not) represent himself as an expert on temporary works (Falsework) design.

Also if calculations and methods are submitted at Bid stage it could well be construed that they have been checked and accepted by the Engineer (otherwise why request them?) and if future failure occurs responsibility may be affected. Similarly if a future change say for compliance is instructed by engineer, variation may be claimed and responsibility may well also be compromised

Please let me study the future document when we receive it and I will then discuss further.

DCI: I recommend consideration of something like the following, which is still very much a draft idea for now. Please note my further suggestion that it is made optional in Part C for use on particular (not all) projects.

I still need to study this BS further.

Please also refer to separate definitions of Falsework, Formwork and other terms above.

- 1.26.1. Unless otherwise stated in the Bidding Documents, Bidders are required to comply with BS5975: 2019 Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.
- 1.26.2. The requirement for specifying compliance with BS5975: 2019 in the Bidding Documents by a Project Executing Agency shall be determined by the extent and nature of the Works, Temporary Works and in particular the extent and nature of Falsework and Formwork design. JICA recognise that the requirement may be greater on larger or more complex Works particularly those with a high content of Formwork and Falsework containing proprietary equipment and/or traditional structural and scaffolding solutions, which are:
 - (1) Designed to support excessively heavy loads.
 - (2) Of excessive height or unusual shape,
 - (3) Of difficult access, or
 - (4) With unusual structural solution.
- 1.26.3. Other alternative internationally accepted standards are also acceptable if approved by the Engineer but only if such standards contain equivalent requirements for management of Temporary Works including the design of Falsework (including Class A Falsework).
- 1.26.4. It is to be noted that BS5975: 2019 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975:2019 and shall submit such justification to the Engineer for his information and consent .

- 1.26.5. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.
- 1.26.6. Where the Bidding Documents state that BS BS5975: 2019 is to apply, the Contractor shall appoint at least the following principal specialist staff who will be dedicated to the Temporary Works:
- (1) Temporary Works Coordinator (TWC): responsible for ensuring the preparation and implementation of effective procedures and who shall retain overall responsibility for all Temporary Works on the Site including the Temporary Works of Subcontractors. The Contractor shall not use the TWC or other personnel of Subcontractors to act as his TWC.
 - (2) Temporary Works Designer (TWD): responsible for preparing the design of all Temporary Works (including any Falsework).
 - (3) Temporary Works Supervisors (TWS): responsible for the construction, safe use, maintenance, dismantling and removal of all Temporary Work in accordance with the design and the requirements of the TWC and TWD and for providing the HSO with the following information to permit further actions:
 - (a) Confirmation that the Temporary Works have been erected in accordance with the design and that such Temporary Works and ready to accept loading.
 - (b) Confirmation that the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works.
- 1.26.7. The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed and completed in accordance with BS5975: 2019 and the Contract. All such records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer
- 1.26.8. The TWC, TWD and TWS shall be appropriately qualified and experienced and the TWC and TWD shall be named in the Bid and hence the Contract. The TWD can be either Contractor's Personnel or an appropriately qualified and experienced specialist Subcontractor to be named in the Bid or be subsequently consented to by the Engineer.
- 1.26.9. Procedures for the appointment and any replacement of the TWC, TWD or TWS shall be the same as described for the HSO in JSSS Sub-Clause 1.7.
- 1.26.10. The Executing Agency (via their consultant) during the design stage shall consciously endeavour to remove or reduce risks in the Permanent Works as far as possible through the design process for example by changing high level in-situ concrete structures to precast or prefabricated structures, simplifying structures and applied finishes, services and the like.
- 1.26.11. Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and where possible shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The following clause requires particular and careful consideration and internal discussion.

- 1.26.12. The Contractor shall submit method statements for parts of the Temporary Works (including designs and calculations of Falsework) as may be requested by the Engineer under the Contract for his review.

The Engineer's review shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer has no obligation under the Contract to review Temporary Works design however he may choose to do so for those parts which he may consider to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task. The Engineer shall have no obligation to issue any response or comment, however if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC3.1(c) and issued without prejudice to the Contractor's overriding responsibility for the adequacy of the Temporary Works.

1.26.13. Where the Bidding Documents do not require the Contractor to comply with BS5975: 2019, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the provision, use, management, dismantling and removal of Temporary Works including for example by ensuring the following:

- (1) Appointment of appropriately qualified and experienced staff.
- (2) Preparation of an adequate Temporary Works design.
- (3) Independent internal or external checking of the Temporary Works Design.
- (4) Preparation of a Temporary Works register and records
- (5) Pre-erection inspection of all Temporary Works materials, components and equipment.
- (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the temporary works, including procedures to:
 - (c) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO of a formal "permit to load".
 - (d) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO of a formal "permit to dismantle" where necessary.

1.26.14. The Safety Plan shall include measures to ensure that the design, erection, maintenance, dismantling and removal are all carried out by competent and experienced individuals and in a controlled and closely supervised manner.

1.27.2 Whether there is or is not any legal requirement under the Laws of the Country for qualification, all of the Contractor's Temporary Works staff and any specialist Temporary Works Subcontractors shall have appropriate academic and Temporary Works coordination, design or supervision qualification as appropriate, work experience in construction and in Temporary Works Design and whom the Contractor considers are qualified to perform the duties.

ANNEXES TO PART B: JICA REQUIREMENTS

Annex B.1: Items to be described in the Safety Plan

DCI: NK please note that text generally has been changed from original so that this is coordinated with other changes basically to make it work better.

Further MD coordination with Part C is required

Coordination is also required in future for all other Technical Sections 2 onwards (e.g. health) where further requirements may make revision here necessary.

(1) Description of the Works

A description of the Works in outline and with overall layout plan to give an understanding of the overall layout and content of the Works showing main construction items and areas, roads, road access locations, working areas, storage areas, temporary offices, laydown areas, warehouses and the like facilities and including a summary of principal work items and significant quantities, etc.

(2) Contractor's Corporate Policy on Health and Safety Management

A description of the Contractor's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Contractor's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Contractor's Personnel

A description of the health and safety management organisation at Site headed by the Contractor's Health and Safety Officer at Site and showing the responsibility and authority of all other Contractor's Personnel persons involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country to be complied with for the health and safety management of the Works, unless superseded by JSSS. If superseded by JSSS then the relevant clause number of JSSS shall be inserted.

(5) Contractor's Safety Certification and Implementation Policy

NK see query in JSSS Chapter 1 (Sub-Clause 1.5) and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under Clause CI.

The following Sub-Clauses have also been added to JSSS Chapter 1.

Unless otherwise expressly stated in the Bidding Documents, the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

An authorised true copy of the current certification shall be provided in this part of the Bid and shall subsequently be included with the Contract.

(6) Temporary Works

NK this requires to be added as it is an essential part of the Safety Plan

Description of the arrangements for controlling risks arising from the use of Temporary Works by ensuring that the requirements of JSSS Chapter 1: Temporary Works, Sub-Clause 1.27 are fulfilled.

(7) Safety Measures for Contractor's Equipment

A description of the procedures for inspecting and maintaining Contractor's Equipment together with all spare parts including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(8) Health and Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(9) Plans for Health and Safety Education and Training

An outline description of the proposed education and training methods and facilities including participants, time, teaching materials, policies for selecting educators and trainers, etc. and covering safety induction.

(10) Deployment of Health and Safety Related Facilities and Personal Protective Equipment (PPE)

A description of the intended policies for the deployment of facilities and equipment to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general Personal Protective Equipment (PPE) and the use of additional PPE for particular working conditions and environments.

(11) Health and Safety Rules

A description of the general health and safety rules (e.g. limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site.

If a specific work area, condition or environment (such as operational areas, hazardous areas, Confined Spaces or the like) requires detailed rules, this shall be stated and detail will be developed in later issues of the Safety Plan.

(12) Site Safety Inspection Plan

A description of the methods for on-Site inspections showing locations and frequency. The description shall also include the methods for reporting, recording and utilising results.

Also attaching warning notices and labelling hazardous equipment, structures and the like?

(13) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any other trespassers upon the Site will be prevented. The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.

(14) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas

within the Site.

(15) Prevention of Construction Accidents at Site

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(16) Emergency Response Plan

A description of the Emergency Response Plan including the action plan for rescue of casualties in an emergency such as when a major accident or disaster occurs, work discontinuation, notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.

(17) Accident Relief Plan

A description of the Accident Relief Plan including the procedure for first aid at the location and time of any accident and a description of appropriate medical facilities to be provided at the Site, including for example nurse, doctor, ambulance etc. all as stated in the Bidding Documents. The procedure shall also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(18) Facilities for Maintaining the Occupational Health Environment

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

(19) Work Discontinuation Criteria

A description of the proposed criteria for discontinuation by HSO of work or example when danger is predicted for work due to strong wind, heavy rain, snow or other factors

(20) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings, 5S and KYT activities (refer to JSSS Sub-Clause 1.13)

(21) Legal Remedies and Requirements after Occupational Accidents

A description in brief of the legal requirements and remedies in the case of injuries and death at work and for personnel affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

Annex B.2: Dangerous or Harmful Operations

DCI: *I have concerns about whether the information in the following annexes is of any value in an international context, I think not. In a domestic Japanese sense these requirements are of course very important as they are integrated with many other Japanese laws and regulations. However when abbreviated extracts only are included it does not have great meaning and there appears to be much missing which may not be covered by the fall-back (OSHA).*

Please consider all very carefully.

I am inclined to suggest that a simple basic requirement such as GC6.9 is sufficient, perhaps adding some reference to training and making the contractor responsible for all is probably better than going into so much detail for only a part.

NK: *we will reconsider and discuss with JICA about Annex 2.*

The following is a list of example work types classified/defined as “Dangerous or Harmful Operations”

DCI: *Is this Annex intended to be a definition?*

When Contractor’s Personnel are engaged in the following or other potentially dangerous or harmful operations such personnel shall be given special health and safety training appropriate to the operations concerned.

Examples of such operations include (but are not restricted to) the following:

(as provided for by the Ordinance of the Ministry of Health, Labour and Welfare).

DCI: *I requested a complete list at our last meeting however, according to the above Ordinance there are many more operations and requirements in addition to this list and also as this effectively applies only in Japan; is therefore a real need for this?*

- (1) Crane operation and mobile crane operation
- (2) Welding and cutting of metal using arc welder *what about gas welders and cutting machines?*
- (3) Forklift operation
- (4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: ~~3t or more~~) *why 3t or more? Why not all?*

DCI: *Vehicle-type? What does it mean exactly? Does it mean wheeled? If so how about tracked equipment? What is the difference between (4) and (5)?*

- (5) Vehicle-type construction equipment operation (for foundation work: ~~3t or more~~)

DCI: *why 3t or more? Why not all? what about track type?*

- (6) Roller operation *what type?*
- (7) Operations that use organic solvents

DCI: *what about other harmful substances and explosives for example?*

- (8) Sling work
- DCI:** *meaning hoisting and rigging work*

- (9) Rope access work
- DCI:** *cradles and hoists?*

- (10) Work to be performed using a full harness type of fall protection device where the height is 2 meters or more and it is difficult to provide for the work floor

DCI: *meaning of difficult? Too expensive? Is this coordinated with other chapters?*

What about small tools (drills and angle grinders) all electrical works, gas pipe works etc. etc.?

Ditto related academic educational achievements?

And Confined spaces?

NK: we will reconsider and discuss with JICA about Annex 2.

Annex B.3: Subjects of Special Education for Dangerous or Harmful Operations

DCI: Please note that this still needs English edit and correction, some commented on below, but problem exists throughout.

When Contractor’s Personnel are engaged in the following or other potentially dangerous or harmful operations such personnel shall be given special health and safety training appropriate to the operations concerned.

DCI: Is this “health and safety training” or “skill training”?

It appears to be operator skill training? Is this the purpose?

Can this apply internationally?

Examples of special training for the above listed sample operations include (but are not restricted to) the following:

(1) Special education for crane operation and mobile crane operation:

DCI: Surely this is common to all crane operations why particularise one type? Or training should be specific for the types of crane being operated on Site.

Subject	Scope
1 Knowledge of mobile and other cranes	Type and model, main structural parts, operating device, safety device, brake function, handling method, method of inspection and maintenance
2 Knowledge about motor and electricity	Internal combustion engine, steam engine, hydraulic drive, danger from electric shock
3 Knowledge of mechanics necessary for operation of mobile crane and other cranes	Force (composition, decomposition, balance and moment), centre of gravity, load, wire rope, hook and hook strength, relationship between wire rope application and load
4 Practical skill	Method of mobile crane and other crane operation Signs for mobile crane and other crane operation

DCI: What is the extent of “practical skill training” and others above, is it testing to ascertain of skills exist?

(2) Welding and cutting of metal performed using arc welder

DCI: Gas welding also?

Subject	Scope
1 Knowledge of arc welding etc.	Basic theory of arc welding, basic knowledge about electricity
2 Basic knowledge on arc welding equipment	DC arc welder, AC arc welder, automatic electric shock prevention device for AC arc welder, welding rod and rod holder, wiring
3 Knowledge of arc welding work methods	Inspection and maintenance before work, methods of welding and cutting, inspection of welds, post-work measures, accident prevention

4 Practical skill	Handling of equipment for arc welding work
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(3) Forklift operation

Subject	Scope
1 Knowledge of equipment structure and handling methods for the travel of a forklift. <i>What is the meaning of this?</i>	Structure and method of handling for forklift engine, power transmission device, traveling device, steering device, braking device, auxiliary device for traveling
2 Knowledge of equipment structure and handling methods for cargo handling <i>What is the meaning of this?</i>	Structure and handling method of hydraulic equipment (including safety valve), head guard, backrest, auxiliary devices for cargo handling, method of inspection and maintenance
3 Knowledge of mechanics necessary for forklift operation	Force (composition, decomposition, balance and moment) weight, centre of gravity and stability of objects, speed and acceleration, load, stress, material strength <i>This appears to be excessive for the average fork lift driver?</i>
4 Practical skill	Operation of traveling, operation of cargo handling

(4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: 3 t or more)

Meaning see before also?

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods motors for vehicle-type construction equipment (for ground levelling, transportation, loading and digging), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance
4 Practical skill	Operation of traveling, operation of equipment for work

(5) Vehicle-type construction equipment operation (for foundation work: 3 t or more)

Less than 3t also?

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods of motors for vehicle-type construction equipment (for foundation work), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for foundation work), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for foundation work), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance
4 Practical skill	Operation of traveling, operation of equipment for work

(6) Roller operation

Subject	Scope
1 Knowledge of roller	Types and applications of rollers, structure and handling method of Power transmission devices of rollers, working devices, steering devices, brakes, electrical devices, alarm devices and auxiliary devices, method of inspection and maintenance
2 Knowledge of general matters required for roller operation	Mechanics necessary for operation, construction method by roller
3 Practical skill	Roller operation method

(7) Operations that use organic solvents

Include here within equipment and only solvents, no other chemicals or hazardous substances?

Subject	Scope
1 Work environment management	Method of maintenance and inspection of equipment for venting prevention measures of organic solvent vapour and equipment for ventilation, Grasp and maintain the working environment
2 Work management	Work management method, occupational health protective

	equipment
3 Health management	Types and hazards of organic solvents, operations using organic solvents, health hazards caused by organic solvents, prevention methods and first-aid measures, medical check-up and follow-up measures
4 Accident case	Accident cases and prevention measures

(8) Sling work

Subject	Scope
1 Knowledge of cranes, mobile cranes, other cranes and derricks (hereinafter referred to as "cranes etc.")	Type and model, structure and function, safety device and brake
2 Knowledge of mechanics necessary for slinging work	Force (composition, decomposition, balance and moment), centre of gravity of simple figures and stability of objects, friction, weight, load
3 Method of slinging	Selection and use of the sling tool, basic work action (including safe operation method), method of signalling
4 Practical skill	Signs for operation, work with a sling for a crane

(9) Rope height work

Subject	Scope
1 Knowledge of rope height work	Method of rope height work
2 Knowledge about main ropes etc.	Types of main ropes, structure, strength and handling methods, methods of inspection and maintenance of main ropes, etc.
3 Knowledge about prevention of occupational accidents	Measures for the prevention of occupational accidents caused by the fall, methods of using, maintaining and inspecting safety belts and protective helmet
4 Practical skill	Method of rope height work, inspection of main rope etc.

(10) Work to be performed using a full harness type of fall prevention equipment where the height is 2 meters or more and it is difficult to provide for the work floor

Subject	Scope
1 Work knowledge	Types of equipment used for work, structure and handling methods, methods for inspecting and maintaining equipment used for work, methods of work
2 Knowledge of fall prevention equipment	Types and structures of full harnesses and lanyards for fall prevention equipment, methods for mounting the full

(limited to full harness type, the same shall apply hereinafter)	harnesses, installation and selection methods for lanyards, methods of inspection and maintenance of fall prevention equipment, how to use the related equipment for fall prevention equipment
3 Knowledge about the prevention of occupational accidents	Measures to prevent occupational accidents due to fall, measures to prevent hazards due to falling objects, measures to prevent electric shock, methods of using protective helmet and methods of maintenance and inspection, and other accident due to work and its preventive measures
4 Practical skill	Method of using fall prevention equipment

Annex B.4: Work Requiring the Assignment of an Operation Leader

The following is a list of example work types that require the appointment and assignment of an Operation Leader to each team of workers engaged upon such work at the Site.

There are many more

Such Operation Leaders shall be given special health and safety training appropriate to the operations concerned.

Examples of operations shall include (but are not restricted to) the following:

- (1) Earth excavation and shoring work
- (2) Tunnel excavation work
- (3) Tunnel lining work
- (4) Excavation work for quarrying
- (5) Formwork, Falsework, supports and shoring assembly/dismantling work
- (6) Scaffolding assembly/dismantling work
- (7) Steel frame fabrication and erection work on buildings and structures
- (8) Steel bridge fabrication and erection work
- (9) Wooden, masonry and other building work
- (10) Demolition work of concrete, masonry or steel structures
- (11) Reinforced concrete construction work
- (12) Organic solvent work and other hazardous substances or materials
- (13) Work in hazardous areas
- (14) Work in Confined Spaces

Annex B.5: Subjects of Skill Training Course for Operation Leaders

DCI: Skill training is included for operation leaders but no such skill training or checking is included for other skilled persons is this correct?

Is this “training” or checking to ascertain that operation leaders have the skills?

If “Operation Leaders” (see out earlier assumed definition based on JICA scop) include foremen, gangers, charge hands and the like in other countries, and if they are already qualified and paid as foremen, gangers, charge hands and the like, do they need to be re-trained and re-qualified as follows?

These appear to be very detailed training requirements.

This Annex requires significant coordination with Annex B.4, with addition and editing before it can be finalised but is it necessary? Any changes in Annex B.4 need to be added here.

Add work in hazardous areas and work in Confined Spaces

Examples of special training for the operations leaders shall include (but are not restricted to) the following:

- (1) Operation Leader for Earth excavation and shoring work

Not edited:

Subject	Scope
1 Knowledge of work method	Method of ground excavation, treatment of loose rocks and buried objects, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock, and the type, material, structure, assembly drawing, maintenance and inspection of earth shoring, matters related to installation and removal of strut and wailing
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases, measures for preventing hazards, collapse prediction, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

- (2) Operation Leader for tunnel excavation work

Subject	Scope
1 Knowledge of work method	Method of tunnel excavation, mucking, and types, structure and method of assembling of tunnel support, method of installing rock bolts
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases and toxic gases, measures for preventing hazards
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(3) Operation Leader for tunnel lining work

Subject	Scope
1 Knowledge of work method	Types, materials, structure and assembling drawings, inspection and repair of tunnel support, method of assembling and dismantling tunnel support
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, instruments and tools, measures for preventing hazards, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(4) Operation Leader for excavation work for quarrying

Subject	Scope
1 Knowledge of rock types, drilling methods for rock excavation, etc.	Types of rock, method of excavation for extraction of rock, treatment of loose rock, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases, measures for preventing hazards, collapse prediction, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(5) Operation Leader for formwork, Falsework, supports and shoring assembly/dismantling work

Subject	Scope
1 Knowledge of work method	Types and materials of form and form shoring, structure of form shoring, assembly drawings, inspection, etc. Methods of assembly and dismantling of form and frame shoring
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(6) Operation Leader for scaffolding assembly/dismantling work

Subject	Scope
1 Knowledge of work	Types of scaffolds, materials, structures and assembly

method	drawings, methods of scaffold assembly, disassembly and change of work, inspections and repairs. Matters of structures and methods assembly, disassembly and changes of climbing bridges, protective shelf, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(7) Operation Leader for steel frame fabrication and erection work on buildings and structures

Subject	Scope
1 Knowledge of work method	Types of buildings and towers, materials, structures, design drawings, shop drawings, equipment and tools, methods of work for assembling steel frames of buildings, etc., inspection
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(8) Operation Leader for steel bridge fabrication and erection work

Subject	Scope
1 Knowledge of work method	Types of bridges, materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(9) Operation Leader for wooden, masonry and other building work

Subject	Scope
1 Knowledge about constructing structural members of buildings, installing floors, roofs, etc.	Construction methods of main structural parts such as frame, floor structures, walls, construction methods of roof and outer wall foundation, joints, order of construction, reinforcement method for frame
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(10) Operation Leader for demolition work of concrete or masonry structures

Subject	Scope
1 Knowledge about structural members including concrete masonry and reinforcement etc.	Types, structures, construction method of concrete and masonry work, types of method of construction, method of work, work plan, coordination with m & e services etc
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(11) Operation Leader for reinforced concrete construction work

Subject	Scope
1 Knowledge of work method	Types of materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(15) Operation Leader for organic solvent work and other hazardous substances or materials

Subject	Scope
1 Knowledge of health hazards and their preventive measures.	Pathology, symptoms, prevention methods, first-aid measures and health problems caused by such materials
2 Knowledge for improving the work environment	Properties of organic solvents, and other hazardous substances or materials, management of equipment and other facilities related to production and handling of such materials, methods of evaluation and improvement of working environment
3 Knowledge of protective equipment	Type, performance, method of use and management of protective equipment pertaining to the production or handling of such materials
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence <i>Meaning?</i>

JICA STANDARD SAFETY SPECIFICATION (JSSS)

CHAPTER 1: GENERAL REQUIREMENTS

PART C: REQUIRED AMENDMENTS TO “JICA STANDARD BIDDING DOCUMENTS”

[This Part C applies to Executing Agencies (employers and their consultants) for use in the preparation of PQ and Bidding Documents, evaluation of Bids and award of Contracts]

JICA advise that the amendments described will be made to the “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA), October 2012, version 1.1. (hereinafter referred to as “JSBD”).

The Bidding Documents for particular Projects where JSSS has become effective (as described in the above “Part A: Preamble Notes”), shall be drafted to take account of such amendments in advance of the publication of the updated JSBD, in accordance with the following instructions.

BIDDING PROCEDURES:

C1. Particular Safety Requirements:

Part 1 – Bidding Procedures, Section I: Instructions to Bidders, Section VI. Works Requirements, Specification, pages WR-3 to WR-5

Add the following additional text on page WR-5 to follow on from the existing text.

JICA Standard Safety Specification (hereinafter referred to as JSSS) contains detailed requirements for health and safety including procedural requirements for the preparation, submission, review and response processes for Method Statements and Safety Plans for the execution of the Works.

Care shall be therefore be taken when drafting Bidding Documents for Projects where JSSS is to be used to ensure that there is no duplication of the JSSS requirements in the Technical Specification¹ for such Projects. Unnecessary and duplicated reference **must** be avoided.

JICA stress the importance of the Employer putting in place a sound working environment for the Contractor and therefore Bidding Documents should include for example: reasonable Time(s) for Completion; reasonable, continuous and unobstructed access to the Site and sufficient Site area(s), working and storage areas, all wherever possible. Requirements shall be clearly described in the Bidding Documents.

It must also be recognised that JSSS constitutes a range of standard safety requirements that shall apply generally on their ODA Projects and consequently it is necessary to specify particular safety requirements for specific Projects. Such particular safety requirements shall be carefully and precisely drafted and included in the Technical Specifications of such Projects, covering for example the following²:

JSSS Chapter 1 Reference	Item
1.5 Contractor’s Safety Certification	State if the Bidder/ Contractor is required to be formally accredited under OHSAS 18001 and if so require submission of a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or equivalent from an internationally

¹ To avoid any potential confusion with the “JICA Standard Safety Specification”, reference is made above to “Technical Specification” as this is the description used in JSBD although not in the FIDIC Conditions of Contract where this is defined as “Specification”.

² See also later checklist

	recognised and approved organisation
1.7 Contractor's Health and Safety Management Staff	<p><i>(On small Projects)</i> State if the HSO is <u>NOT</u> required to be assigned full-time on the Works.</p> <p>If not so stated in the Bidding Documents, contractors must assign full-time dedicated HSO and if applicable other support personnel.</p> <p>JICA advise that full-time assignment is the normal requirement and part-time or shared assignment is only allowable on very small projects with separate written justification to be provided by the Executing Agency to JICA.</p>
1.11 Project Safety Committee	<i>(On large Projects)</i> State if a Project Safety Committee is to be established for the Project and add any further requirements.
1.12.2 Employer's other contractors (see also GC2.3)	Describe the individual scope of Works for any other contractors to be employed by the Employer on the Site and where possible identify them by name together with any legally constituted public authorities who may be employed in the execution on or near the Site of any work not included in the Contract, and specify working locations, access and timing as far as possible.
1.16 Engineer's Safety Representative	<i>(On large Projects)</i> State if the Engineer will appoint a full-time or part-time Safety Representative as an assistant upon the Works or state if the Engineer will act in this capacity.
1.24.6 Accident Relief Plan	<p><i>MD to Coordinate in future with 1.24, 1.25 Health and with other Sections</i></p> <p>Describe the minimum measures and facilities to be provided in consideration of the location(s) of the Site and the location, nature and timing of the Works, including:</p> <ol style="list-style-type: none"> (1) Medical personnel to provide first aid and additional medical assistance, at least certified as having successfully completed a first aid course by a recognised provider, such as the Red Cross and also including docyotrs and nusres where sp requiured by the (2) Suitably equipped ambulances or other approved vehicles, with drivers and attendants that are properly trained to transport casualties to medical personnel staff and facilities on Site or to medical staff and facilities including hospitals off the Site. (3) First aid room, clinic or like facilities on Site and specify equipment and consumables (4) Communication facilities and measures for emergency response (5) First aid appliances, aids, instruments and medicines.

	<p>(6) First aid training, appointment of first aiders and dissemination of information.</p> <p>(7) Include others as appropriate</p>
1.26 Health Issues	<p><i>requires further development, addition and coordination by MD</i></p> <p><i>Awaiting NK documents to ascertain scope.</i></p>
1.27 Compliance or otherwise with BS5975: 2019 Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework	<p><i>DCI - I suggest that non-compliance should be the exception rather than the norm.</i></p> <p>If it is necessary for the Bidder to comply with BS5975: 2019 on the Works, the Executing Agency shall ensure that the Bidding Documents clearly state this. For this purpose reference shall be made to the basic criteria described in JSSS Sub-Clause 1.27.</p> <p>If the Bidder is NOT required to comply with BS5975: 2019 on the Works, the Bidding Documents shall clearly state this, and separate written justification shall be provided by the Executing Agency to JICA.</p> <p><i>NK please refer to queries on this subject in 1.27</i></p> <p>If Bidders are required to comply with BS5975: 2019, the Bidding Documents shall confirm that the following Temporary Works coordination, design and supervision staff are required:</p> <ol style="list-style-type: none"> (1) Temporary Works Coordinator (TWC). (2) Temporary Works Designer (TWD). (3) Temporary Works Supervisor (TWS). <p>If compliance is required TWC and TWD, Bidding Documents should require them to be named in the Bid.</p> <p>JICA note that this (and more) can always be proposed by the Bidder, whether included as a specified requirement or otherwise.</p> <p>If the Bidder is not required to comply with BS5975: 2019, the Bidding Documents shall state that the Bidder is to comply in any event with the requirements of Sub-Clause 1.26.13 and 1.26.4 and submit full details in the Safety Plan.</p>
<p><i>The following all requires further development, addition and coordination by MD:</i></p>	
<p>Temporary Perimeter Fencing:</p>	<p>Simple fencing to complicated security depends upon Project and location and nature of works.</p> <p>Improvement Projects (e.g. airports, roads and railways) may not need this as existing or maybe new permanent</p>

	<p>fencing can be used.</p> <p>Gates barriers and other treatment at Site entrances e.g. simple gate or barrier through to complicated type including communications, lighting and temporary power</p> <p>Security at entrance and around the site (minimal, extensive or in some cases on existing facilities) already provided by employer.</p> <p>Fencing within the site around hazardous areas or around operating plant areas.</p>
<u>Temporary Accommodation and Facilities</u>	<p>Should list the required facilities in a range such as none for urban Projects, to full accommodation for rural Projects where no suitable accommodation.</p> <p>Health and sanitation requirements</p> <p>Leisure facilities</p> <p><u>Temporary Transportation Requirements</u></p> <p>Nothing for urban Projects, to full provision, e.g, buses and drivers etc for rural Projects where nothing safe is available.</p> <p><u>Canteen Facilities</u></p> <p><u>Sanitation Facilities</u></p> <p>etc etc</p>
<u>Others to add - MD</u>	

To assist with compliance of the above requirements, a checklist has been prepared and is attached to this Part

To be coordinated by MD with the later checklist

C2. Required Detail of Safety Plans in Bid:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Safety Plan, page BF-33.

Delete “[Insert Safety Plan]” and in this place insert the following:

Prepare the Safety Plan including details of all items listed below:

It is understood that the Bid Stage Safety Plan will be developed by the Contractor in more detail in the Safety Plan issued at Commencement Stage and at later stages but it is important that at Bid stage sufficient information is provided so that the following can be understood and evaluated.

Irrespective of what the Bidder may include in his plans and of any subsequent acceptance, approval or consent to the same, the detailed requirements of JSSS will continue to apply and prevail unless otherwise specifically agreed later in writing by the Engineer.

NK For Bidding purposes, the following is a copy of Annex 1, please coordinate as necessary if changes are made to Annex 1 and make the same changes here

(1) Description of the Works

A description of the Works in outline and with overall layout plan to give an understanding of the overall layout and content of the Works showing main construction items and areas, roads, road access locations, working areas, storage areas, temporary offices, laydown areas, warehouses and the like facilities and including a summary of principal work items and significant quantities, etc.

(2) Contractor's Corporate Policy on Health and Safety Management

A description of the Contractor's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Contractor's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Contractor's Personnel

A description of the health and safety management organisation at Site headed by the Contractor's Health and Safety Officer at Site and showing the responsibility and authority of all other Contractor's Personnel involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country to be complied with for the health and safety management of the Works, unless superseded by JSSS. If superseded by JSSS then the relevant Clause or Sub-Clause number of JSSS shall be inserted.

(5) Contractor's Safety Certification and Implementation Policy

NK see query in JSSS Chapter 1 (Sub-Clause 1.5) and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under item C1.

The following Sub-Clauses have also been added to JSSS Chapter 1.

Unless otherwise expressly stated in the Bidding Documents, the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

An authorised true copy of the current certification shall be provided in this part of the Bid and shall subsequently be included with the Contract.

(6) Temporary Works

NK this requires to be added as it is an essential part of the Safety Plan

Description of the arrangements for controlling risks arising from the use of Temporary Works by ensuring that the requirements of JSSS Chapter 1: Temporary Works, Sub-Clause 1.27 are fulfilled.

(7) Safety Measures for Contractor's Equipment and Temporary Works

Requires changing due to the above added Sub-Clause

A description of the procedures for inspecting and maintaining Contractor's **Equipment and Temporary Works** together with all spare parts including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(8) Health and Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(9) Plans for Health and Safety Education and Training

An outline description of the proposed education and training methods and facilities including participants, time, teaching materials, policies for selecting educators and trainers, etc. and covering safety induction.

(10) Deployment of Health and Safety Related Facilities and Personal Protective Equipment (PPE)

A description of the intended policies for the deployment of facilities and equipment to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general Personal Protective Equipment (PPE) and the use of additional PPE for particular working conditions and environments.

(11) Health and Safety Rules

A description of the general health and safety rules (e.g. limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site.

If a specific work area, condition or environment (such as operational areas, hazardous areas, Confined Spaces or the like) requires detailed rules, this shall be stated and detail will be developed in later issues of the Safety Plan.

(12) Site Safety Inspection Plan

A description of the methods for on-Site inspections showing locations and frequency. The description shall also include the methods for reporting, recording and utilising results.

Also attaching warning notices and labelling hazardous equipment, structures and the like?

(13) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any other trespassers upon the Site will be prevented. The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.

(14) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

(15) Prevention of Construction Accidents at Site

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(16) Emergency Response Plan

A description of the Emergency Response Plan including the action plan for rescue of casualties in an emergency such as when a major accident or disaster occurs, work

discontinuation, notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.

(17) Accident Relief Plan

A description of the Accident Relief Plan including the procedure for first aid at the location and time of any accident and a description of appropriate medical facilities to be provided at the Site, including for example nurse, doctor, ambulance etc. all as stated in the Bidding Documents. The procedure shall also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(18) Facilities for Maintaining the Occupational Health Environment

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

(19) Work Discontinuation Criteria

A description of the proposed criteria for discontinuation by HSO of work for example when danger is predicted for work due to strong wind, heavy rain, snow or other factors

(20) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings, 5S and KYT activities (refer to JSSS Sub-Clause 1.13)

(21) Legal Remedies and Requirements after Occupational Accidents

A description in brief of the legal requirements and remedies in the case of injuries and death at work and for personnel affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

C3. Bid Evaluation Requirements for Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section III. Evaluation and Qualification Criteria, 1, Evaluation, 1.1 Evaluation of Technical Bids.

(Applies to both Section III. Evaluation and Qualification Criteria (Following Prequalification) and Section III. Evaluation and Qualification Criteria (Without Prequalification), Pages EQC-1)

In the paragraph stating [Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the Contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI, Works Requirements.] insert "and Safety Plan" in the third line after the words, "work methods".

Insert the following additional paragraph after the above paragraph:

"Evaluation of the Safety Plan shall take account of the Health and Safety Officer, and if compliance with BS5795: 2019 is a specified requirement of the Bidding Documents (refer to JSSS Chapter 1: General Requirements, Part C, Clause C1) of any principal Temporary Works coordination, design and supervision staff, under item in 1.1.2 Personnel and of PPE and any other safety equipment from the Safety Plan in 1.1.3 Equipment."

C4. Health and Safety Officer and (if applicable) Temporary Works staff:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders Section III. Evaluation and Qualification Criteria against 1.1.2 Personnel,

Delete position 2 as stated and insert as follows:

2 Health and Safety Officer at the Site

Delete position 3 and the words “e.g. Health and Safety (Accident Prevention Officer) and insert the following:

(if any of the following are a specified requirement of the Bidding Documents by reference to JSSS Chapter 1: General Requirements, Part C, Clause C1):

3. Temporary Works Coordinator

4. Temporary Works Designer

5. Temporary Works Supervisor

On the following line insert the words:

Other personnel to be inserted as appropriate.

Under “Notes for Employer” delete notes 1 and 2 and in this place insert the words:

The proposal for all required personnel shall be evaluated.

C5. Bidders Safety Declaration (Form BSD):

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms

Include “Form BSD - Bidders Safety Declaration” in the Bidding Documents after the existing Form-ACK, with new page BF-56; renumber existing pages BF-56 and BF-57 appropriately and insert suitable reference in the Table of Forms on page BF-1.

The Employer requires the Bidder to appoint the Health and Safety Officer at the Site (HSO) prior to Bid submission and this HSO shall sign Form BSD in addition to the Bidder's Official Representative.

Please refer to Annex C.2 to this Part C for a copy of Form BSD

PARTICULAR CONDITIONS OF CONTRACT:

C6. Submission and Review of Method Statements and Safety Plans:

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 4.1 Contractor's General Obligations	<p>Delete that part of the fifth paragraph of this Sub-Clause which states:</p> <p>The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.”</p> <p>and in this place insert:</p> <p>(a) The Contractor shall, whenever requested by the Engineer, submit Method Statements and Safety Plans each with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works or any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the request.</p> <p>(b) The Engineer may review the Method Statements and/or Safety Plans and may give notice to the Contractor stating the extent to which the Method</p>
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	<p>Statement and /or Safety Plan does not comply with the Contract. Within 14 days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no such notice within 21 days of the date of receipt of the Method Statement and/or Safety Plan, the Contractor shall proceed in accordance with the Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within 7 days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within 14 days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(d) The Contractor shall submit a revised Method Statement and/or Safety Plan whenever required by the Engineer or when any previous Method Statement and/or Safety Plan is inconsistent with actual conditions or requirements prevailing at the Site in accordance with the requirements described in items (a) to (c) above.</p> <p><i>DCI: NK can we discuss the requirement for Particular Safety Plans as necessary.</i></p>
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C7. JSSS Comprised as Part of the Contract with Further Safety Requirements:

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause 4.8 Contractor’s Health and Safety Obligations</p>	<p><i>Delete this Sub-Clause completely and replace with the following:</i></p> <p>The Contractor shall:</p> <ul style="list-style-type: none"> (a) Comply with all applicable health and safety Laws of the Country, all standards and regulations, (b) Comply with all applicable health and safety obligations specified in the Contract including those contained in the JICA Standard Safety Specification (JSSS) and which as an entire document is to be read and construed as an integral part of the Contract by virtue of this Contract Sub-Clause amendment; (c) Comply with all directions issued by the Contractor's Health and Safety Officer
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	<p>(appointed under Sub-Clause 6.7 [<i>Health and Safety</i>] as amended by PC6.7;</p> <p>(d) Take care of the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed;</p> <p>(e) Keep the Site, the Works (and the other places (if any) where the Works are being executed) clear of unnecessary obstruction so as to avoid danger to these persons;</p> <p>(f) Provide fencing, lighting, safe access, guarding and watching of:</p> <p>(i) the Works, until the Works are taken over under Clause 10 [<i>Employer's Taking Over</i>]; and</p> <p>(ii) any part of the Works where the Contractor is executing outstanding works or remedying any defects during the Defects Notification Period; and</p> <p>(g) Provide any Temporary Works (including roadways, footways, guards and fences) that may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land and property.</p> <p>Within 28 days of the Commencement Date and not less than 28 days before commencing any work at the Site, the Contractor shall submit to the Engineer for information an updated Safety Plan showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works, in the comprehensive detail required by the Bidding Documents.</p> <p>This shall be based upon the Safety Plan submitted at Bid Stage developed as necessary to provide the full information required.</p> <p>This Safety Plan shall be in addition to any other similar document required under applicable health and safety Laws of the Country.</p> <p>The Safety Plan shall set out or refer to all the health and safety requirements:</p> <p>(a) that are stated in JSSS;</p> <p>(b) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and</p> <p>(c) that are necessary to effect and maintain a</p>
--	---

	<p>healthy and safe working environment for all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site and other places (if any) where the Works are being executed.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer, shall be in accordance with PC4.1 [<i>Contractor’s General Obligations</i>].</p> <p>In addition to the safety reporting requirements of sub paragraph (g) of Sub-Clause 4.21 [<i>Progress Reports</i>] the Contractor shall inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than 24 hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.</p> <p>The Contractor shall, comply with the health and safety recording and reporting requirements of JSSS.</p> <p>The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p>
--	---

C8. Change “accident prevention officer” to “Health and Safety Officer”:

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 6.7 Health and Safety	In the second paragraph, delete the words “accident prevention officer at the Site” and insert “Health and Safety Officer at the Site ”
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C9. Revised Order of Priority of Documents

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 1.5 Priority of Documents	<p>Delete sub-items (a) to (i) and insert the following sub-items (a) to (j):</p> <ul style="list-style-type: none"> (a) the Contract Agreement (if any), (b) the Letter of Acceptance, (c) the Letter of Tender, (d) the Particular Conditions - Part A, (e) the Particular Conditions - Part B, (f) these General Conditions, (g) the JICA Standard Safety Specification (JSSS) and the signed Bidder’s Declaration,
---	---

	<ul style="list-style-type: none"> (h) the Specification, (i) the Drawings, and (j) the Schedules and any other documents forming part of the Contract.
--	--

Included to avoid the discrepancy that exists with the Contract Agreement where this is also referred to (see below).

C10. Listing of Documents to be included in the Contract Agreement:

Part 3 - Conditions of Contract and Contract Forms, Section IX. Annex to the Particular Conditions - Contract Forms

<p><i>[Option A: One-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p>In paragraph 2. delete sub-items (i) to (ix) and insert the following sub-items (i) to (x):</p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Bid; (iii) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (iv) the Particular Conditions; (v) the General Conditions; (vi) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (vii) the Specification; (viii) the Drawings; (ix) the completed Schedules; and (x) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
---	---

and:

<p><i>[Option B: Two-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p>In paragraph 2. delete sub-items (i) to (x) and insert the following sub-items (i) to (xi):</p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Technical Bid; (iii) the Letter of Price Bid; (iv) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (v) the Particular Conditions; (vi) the General Conditions; (vii) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (viii) the Specification; (ix) the Drawings;
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	(x) the completed Schedules; and (xi) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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ANNEXES TO PART C: AMENDMENTS TO “JICA STANDARD BIDDING DOCUMENTS”

Annex C.1: Checklist of Particular Safety Requirement in Technical Specifications

MD to develop this listing basically to create a simple yes/no check that required safety items have been addressed in the preparation of the Bidding Documents.

The list will be prepared after the later specification sections have been received from NK and have been reviewed by MD.

It is suggested that this listing be completed by the Executing Agency and submitted by them as a separate simple listing at the same time as the draft Bidding Documents are submitted for the concurrence of JICA.

Annex C.2: Form BSD – Bidders Safety Declaration

Form BSD:
Bidders Safety Declaration

I, *[insert name and position of authorised signatory]*, being duly authorized by *[insert name of Bidder/members of joint venture (“JV”)]* (hereinafter referred to as the “Bidder”) to execute this Form-BSD hereby declare our commitment to comply with the requirements of the JICA Standard Safety Specification (JSSS).

I further declare on behalf of the Bidder, that if selected to undertake the Works in connection with the Contract, we will ensure that the Site is established and maintained as a healthy and safe workplace for the Employer’s Personnel and the Contractor’s Personnel and any other persons entitled to be thereon or that may be affected by operations thereby and that the Bidder is aware and accepts to follow all of the relevant health and safety Laws of the Country and the requirements of JSSS.

Irrespective of any Laws of the Country and the enforcement or otherwise of same, the Bidder hereby declares that he has given full and careful consideration, fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor’s Equipment, Personal Protective Equipment, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder further declares that all Works shall be carried out under the control of our qualified and expert health and safety management and where not available in the Country, we will import for sole use upon the Works:

1. New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for purpose and all to meet with the approval of the Engineer in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged?.
2. New or recent Contractor’s Equipment (not more than 5 years old unless otherwise pre-inspected and approved by the Engineer) all fit for purpose, in full working order, safe, clean, non-polluting, complete with all necessary spare parts and consumables and suitable for use on the Works, and

... that all of the above will be used for the purpose intended.

The Bidder further declares that he shall find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.

The Bidder further declares that he (and any of his Subcontractors) shall:

1. Employ workers with appropriate skill, qualification and capability,
2. Fully inform workers about hazards,
3. Provide health and safety training to all Contractor’s Personnel and Employer’s Personnel in a language and vocabulary they can understand.
4. Keep accurate records of work-related injuries and illnesses.
5. Perform tests in the workplace, such as air sampling as required by JSSS.
6. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.
7. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.

8. Provide eyesight, hearing and mobility examinations and other medical tests required by JSSS.
9. Post injury and illness information and data where workers can see them.
10. Inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than 24 hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
11. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidders Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if he is successful with his Bid, the Health & Safety Officer at Site, named below and also included in Bidding Forms, Form PER -1: Proposed Personnel, unless otherwise stated in the Bidding Documents, shall be assigned from the Commencement Date, full time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If our Bid is accepted we agree that this Declaration together with all other documents comprised in our Bid Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidders Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety
Officer at Site)

Name:

Date: _____

Changes since last issue
Comments and /queries



JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA



***Japan International Cooperation Agency
(JICA)***

_____, 2020

Prepared: DCI for NK
Issue: 4
Revision:
Date: 10/09/2019

NK please note that the following is a basic suggestion that requires your further study and legal review with appropriate revision/correction. The disclaimer is based in part on the FIDIC Documents

ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications may have been used in the preparation hereof. JICA acknowledges and gives credit to these relevant sources and expresses its gratitude to such other sources and publications which include:

- 1) *Japanese Acts, Orders and Ordinances including:*

Industrial Safety and Health Act

Order for Enforcement of Industrial Safety and Health Act

Ordinance on Industrial Safety and Health

Safety Ordinance for Cranes

Ordinance on Safety and Health of Work under High Pressure

Ordinance on Prevention of Anoxia, etc.

Ordinance on Prevention of Hazards Due to Dust

Explosives Control Act

Order for Enforcement of Explosives Control Act

Ordinance on Explosives Control

- 2) *“OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A..*
- 3) *Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.*
- 4) *Conditions of Contract for Construction For Building And Engineering Works Designed By The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)*

DCI - I think it better if this is included as FIDIC second edition has been used (copied) in Part C for GC 4.8.

DCI: NK - Please confirm as above and insert further items as necessary to make this list comprehensive)

NK: we will do later.

DCI: Can we please discuss later; has the exact text of the above documents been used as this is this Acknowledgement? In English versions?

DISCLAIMER

JICA has prepared and issued this document in good faith for the reference of executing agencies, contractors and project teams engaged under the Japanese ODA programme, to encourage the attainment of a higher standard of health and safety management on its construction projects. JICA, (together with its consultants and other assistants engaged in the preparation hereof) will not accept or assume any liability or responsibility for any events or the consequences thereof deriving from the use of this document. The document is provided without any express or implied warranty, including without limitation, warranties of accuracy, completeness, fitness for purpose, in general or on particular projects and non-infringement. This document is intended to provide general reference and shall not be relied upon as a specific legal source or reference.

JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

DCI: Please note that all numbering is to be checked and all descriptions to be coordinated and changed in future.

If numbers are not used, explain why (e.g. Future issue etc.)

Please refer to POMI or SMM for a guide

Chapter	Section	Description
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	Part B	JICA Requirements
	Part C	Required Amendments to "JICA Standard Bidding Documents"
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	2.2	Protection of Third Parties from Danger around the site
	2.3	Dangerous and Hazardous Areas
	2.4	Spotters and Flagmen
	2.5	Fall Prevention/Protection
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	2.7	Measures against extraordinary weather
	2.8	Fire prevention
	2.9	Nil Maybe PPE
	2.10	Safety site management
		2.10.1 Information to Workers
		2.10.2 Appointment of Operation Leader Maybe transfer to Chapter 1
		2.10.3 Duty of the Operation Leader Ditto
		2.10.4 Lifesaving equipment for Works on Water
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	4.2	Operation
	4.3	Transportation
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		6.2.2 Other Cranes
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		Basements and waterproofing
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	10.2	Formwork
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		Coffer dams?? The 1 st stage JSSS will not specify other than diving works.

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

PART A: PREAMBLE NOTES

A1. Purpose and Objective:

The Japan International Cooperation Agency (hereinafter referred to as “JICA”) require that all parties engaged upon their ODA Projects shall endeavour to establish and maintain a culture and environment where health and safety is of the highest priority. The common goal shall be to achieve a zero-accident rate, adopting the slogan of “Safety First”.

To assist with this objective, JICA have prepared and published this Standard Safety Specification (hereinafter referred to as “JSSS”), which they aim to be adopted for future selected Projects by the Executing Agency for such Projects.

A2. Effectiveness

JSSS has been published on-line by JICA and it shall become effective and be incorporated by Project executing agencies in the Bidding Documents (and therefore the Contracts) for particular Projects on the date that the Loan Agreement (LA) for that Project has been executed and where the parties to such LA have formally agreed to adopt JSSS as the technical basis for Health and Safety management on that Project.

It is not intended to include or attach a hard copy of JSSS to Bidding Documents or the Contract for respective Projects but a copy of JSSS shall be available on the JICA’s web site shown below:

[http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/_____](http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/)

A3. Incorporation of JSSS into Contracts

JICA require that the Employer, Engineer and Contractor will each print a hard copy of JSSS for their own reference and use and that all of these entities shall fully inform their personnel, Subcontractor’s, sub-consultants, other all parties who are associated with the particular Project of the existence, content and purpose of JSSS and the objectives thereof.

Reference to JSSS and incorporation of the required amendments into the Bidding Documents for any Project and reference to JSSS on the website will be sufficient to deem incorporation of JSSS into the Contract for that Project.

Unless otherwise agreed by JICA and the executing agency of currently on-going JICA funded Projects and between the Employer and Contractor(s) on those Projects, this JICA Standard Safety Specification shall not be applied to such Projects.

Further updates and revisions to JSSS unless otherwise agreed with the Employer will be applied to new Projects from the date that such updates and revisions are published on line.

Such further updates and revisions shall not be applied to on-going JICA funded Projects unless otherwise instructed by the Engineer through the issue of an appropriate Variation under GC 13.1 [*Right to Vary*].

In order that JSSS shall become an integral part of the Bidding Documents for particular Projects and so that the requirements can therefore be implemented immediately after online publication of this document, the particular instructions for alteration of the Bidding Documents by Project employers and consultants are contained within this document in Part C of this Chapter 1: General Requirements. After making such modification to Bidding Documents for particular Projects, JSSS shall be read and construed as a part of the Bid and therefore the Contract for that Project.

It is the ultimate intention of JICA to formally update the separate “Standard Bidding Documents under Japanese ODA Loans” by incorporating the same instructions however in the meantime relevant changes shall be made in accordance with this Standard Safety

Specification.

A4. Compliance and General Obligations

JSSS shall not limit a contracting party's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of Contracts.

Compliance with the JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.

Contractors shall ensure that all health and safety hazards and risks are properly identified, assessed, controlled and evaluated prior to commencement of any work. Only suitably qualified, fit and competent persons may perform the construction activities.

Where the Laws of the Country so state, the Health and Safety Officer (as defined herein) shall be qualified and legally registered as such in accordance with such Laws.

Similarly, JSSS shall not limit the Contractor to the scope contained herein.

All Parts (A, B and C) of this Chapter 1: General Requirements are to be read and construed collectively as integral parts of JSSS and therefore constitute integral parts of the Contract for the Project.

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

PART B: JICA REQUIREMENTS

1.1 Employer's Safety Declaration

By entering into a Contract, the Employer (together with the Engineer acting as his consultant) declares that he shall collaborate in good faith with the Contractor and take all reasonable measures within his authority and under his control to promote the highest achievable health and safety standards in the execution of the Works all in accordance with his contractual and statutory responsibilities and adopting the slogan:

“SAFETY FIRST”

The Contractor shall aim to achieve “Zero-Accident” in the execution of the Works taking full responsibility for the health and safety management of the Works, adopting JSSS that specifies the minimum safety requirements that the Contractor shall implement.

A Bidder's Safety Declaration has been prepared and is included in Part C of this Chapter 1: General Requirements.

1.2 Definitions, Abbreviations and Standards

1.2.1 The following words and expressions in JSSS relating to the Conditions of Contract and the content of this Chapter 1 shall have the definitions stated:

- (1) **“Executing Agency”** means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and defined in the Contract as the Employer.
- (2) **“GC”** and **“PC”** followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) **“Health and Safety Officer”** or **“HSO”** means the Contractor's health and safety officer at the Site to be appointed by the Contractor in accordance with PC 6.7 [*Health and Safety*] and named by the Bidder in his Bid.
- (4) **“JSSS”** or **“JICA Standard Safety Specification”** means the document of this title published officially by JICA on their website, issue number __ dated ____ and as may be modified by the Bidding Documents for the Project.
- (5) **“Method Statement”** means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in PC 4.1 [*Contractor's General Obligations*].
- (6) **“OSHA”** means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

Unless otherwise evident from the text, reference in OSHA to “team leader”, “on-site supervisor”, “On-site supervision”, “Field superintendent”, “work chief” and the like shall be collectively construed as reference to “the Contractor's Representative” and reference to the “safety and health manager of the Contractor” and the like shall be collectively construed as reference to the Contractor's “Health and Safety Officer”. “The construction plan and safety and health plan”, shall be construed according to the

terms for such similar documents required by the Contract.

If any ambiguity or discrepancy is found in the OSHA documents specified in JSSS, or if any difference or discrepancy is found between OSHA documents and JSSS, the Engineer shall issue any necessary clarification or instruction.

- (7) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the agreement with JICA and utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (8) “**Safety Plan**” means a document that contains the overall risk assessments and shows the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in PC 4.1 [*Contractor’s General Obligations*].

“**Safety Plan**” shall also mean “occupational health and safety plan”, “health and safety plan” and “safety plan” all described as such in JSSS and other documents contained in the Contract. ***This may not be necessary if references are consistent.*** The phrase “health and safety” shall be construed as covering “occupational health and safety”.

1.2.2 The following technical words and terms in JSSS shall have the definitions stated:

DCI: This is subject to further development and might ultimately be transferred to a separate Annex

- (1) “**Confined Spaces**” shall mean spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (2) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (3) “**Formwork**” means temporary containment structures for in-situ concrete and its immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (4) “**Hazardous Areas**” means areas defined in Section 2.3 as such.
- (5) “**Operation Leader**” (also known as a “Ganger”, “Leading Hand”, “Foreman” or “Working Foreman” and the like) means a member of the Contractor’s workforce who through experience, internal training and testing is deemed by the Contractor to be qualified to work with and lead the worker’s teams, to direct them in the performance of their assigned duties and ensure their compliance with the Contractor’s safety regulations.
- (6) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level. PPE for PFAS shall comprise of a body harness, an anchorage, connectors and typically shall include a lanyard, deceleration device, lifeline, or suitable combination of these. The use of a Safety Belt for fall arrest systems is prohibited. Wherever PFAS is provided for use, the Contractor shall ensure that it is used.
- (7) “**Personal Fall Restraint System**” or “**PFRS**” means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall. PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and

other devices. Wherever PFRS is provided for use, the Contractor shall ensure that it is used.

DCI: *Above PFRS is recommended but so far not included in JSSS*

- (8) “**Safety Belt**” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard, lifeline or deceleration device. Any safety belt that has actually been subjected to a fall or previous in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for the safety of any worker.

DCI: *there is much more to add to this list so it is complete and the order of above and new items will be rearranged in alphabetical order. I will add to this successively as we receive and edit later sections and draft appropriate definitions.*

1.2.3 The following Sub-Clauses relate generally to the above definitions and to those already contained in the Contract:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) Any reference to “Contractor” within this document shall also be deemed to include “all Subcontractors”, for whom the Contractor shall remain fully responsible.
- (3) Unless otherwise evident from the text, any reference to the Contractor’s responsibilities for “Safety” in this document shall also be construed as reference to “Health and Safety”.
- (4) Any reference in JSSS requiring the provision by the Contractor of safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of such safety measures for Employer’s Personnel and any other persons that are entitled to be on the Site and other places (if any) where the Works are being executed.
- (5) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

1.2.4 The following abbreviations of technical terms shall have the meanings stated:

DCI: *This is subject to further development and may ultimately be transferred to a separate Annex*

PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings

1.2.5 The following abbreviations of standards, codes and the like shall have the meanings stated:

DCI: *This is subject to further development and may ultimately be transferred to a separate Annex*

ANSI	American National Standards Institute.
ASTM	American Society for Testing and Materials.
BS	British Standard.
BSEN	British Standard European Norm.
ISO	International Organization for Standardisation.
JIS	Japanese Industrial Standards.

1.3 Application to Grant Aid and other Projects

- 1.3.1. JSSS has been drafted to apply to JICA ODA Loan Projects and to the relevant FIDIC harmonised form of Contract for such Projects as referred to **JSSS 1.2.3 (5)**.
- 1.3.2. JSSS shall also apply to other JICA assisted Projects that have been awarded under different forms of contract including those under Contractor design contracts and contracts under the JICA Grant Aid programme. When so used, suitable modification shall be required to the definitions and text of JSSS and the Bidding Documents for those Projects to ensure compatibility and consistency with the relevant contract requirements for the Project, reflecting the same intentions, standards and procedures for improving health and safety.

1.4 Laws and Reference Standards

The Contractor shall comply as a minimum with the Laws of the Country, including all health and safety standards.

- 1.4.1 If the Employer has formally agreed with JICA to adopt JSSS for the Project, then the requirements of JSSS shall apply as a minimum and these shall prevail over the technical requirements of Laws of the Country without limiting the Contractor's legal duties and obligations under such Laws.
- 1.4.2 Otherwise where the Laws of the Country (including any health and safety standards) are silent on particular health and safety requirements and where provisions are included in JSSS then JSSS shall apply and prevail.
- 1.4.3 JSSS is an abbreviated document and therefore as a general rule, where JSSS contains insufficient or no technical regulations or no detailed requirements then the related technical regulations of OSHA shall apply.
- 1.4.4 JSSS prescribes minimum requirements and the parties are free to include higher standards when so agreed between Contractor, Employer and Engineer.
- 1.4.5 The Contractor shall be deemed to have studied and familiarised himself with the Laws of the Country and to have ascertained if any part of such Laws **is** superior to any of the particular requirements of OSHA, in which case such particular Laws shall apply and the Contractor shall inform the Engineer accordingly.
- 1.4.6 The reference standards used in JSSS can be substituted with alternative standards after requesting and obtaining the consent of the Engineer who may give such consent only if in his opinion such alternative standards provide an equivalent or higher standard of health and safety than that required by JSSS.
- 1.4.7 Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.5 Contractor's Safety Certification

DCI: *NK: Please confirm if this certification is required and if so is it to be a Bid Qualification requirement (we do recommend that it is). Refer to Part C where I have made this optional*

- 1.5.1. Unless otherwise expressly stated in the Bidding Documents (refer to JSSS **C2. (5)**), the Contractor shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation as determined by the Employer (if to be determined at Bid Evaluation stage) or Engineer (during the **Project** implementation stage).

- 1.5.2. If accreditation is required by the Bidding Documents, an original or authorised true copy of the current certification shall be submitted with the Bid and this shall subsequently be included with the Contract.
- 1.5.3. The Contractor shall submit original or authorised true copies of all current updates to the Engineer when due.

1.6 Safety Plans

- 1.6.1 The Contractor shall be required to submit the Safety Plan at two stages:

- (1) With the Bid submission.
- (2) 28 days before Commencement

In addition, the Contractor may be required to provide particular Safety Plans as may be necessary due to current circumstances or conditions at the Site or as requested by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*], as amended by JSSS C6.

- 1.6.2 For details of the Safety Plan at Bid stage, refer to JSSS C2 [*Detail of Safety Plans in Bidding Documents*]

- 1.6.3 For details of the Safety Plan at commencement stage, refer to JSSS C7 and PC 4.8. [*Contractor's Health and Safety Obligations*]

- 1.6.4 Particular Safety Plans

DCI: *I recommend that automatic submission of "Particular Safety Plans" is confusing and not necessary and has no meaning when the following is considered in conjunction with revised Sub-Clause 4.8 (see Part C, Clause C.7)*

- (1) The Safety Plan (or parts of it) shall be revised or supplemented where considered necessary by the HSO or when required by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*], as amended by JSSS C6. Each such revision or update of the Safety Plan hereinafter referred to as a Particular Safety Plan, shall be submitted promptly to the Engineer in any event not less than 21 days before commencing those parts of the Works, such that the Engineer is made aware in writing of at least the following information for all parts of the Work:
 - (a) Work outline, work procedure and order of carrying out the work;
 - (b) Number of Contractor's Personnel;
 - (c) Safety management system and responsibility and authority of Contractor's Personnel;
 - (d) Risk assessment;
 - (e) Safety measures;
 - (f) PPE for the Contractor's Personnel;
 - (g) Safety education and training of the Contractor's Personnel and TBM;
 - (h) Teaching materials used in education, training and pre-operation TBM before work;
 - (i) Method of information sharing and communication among the Contractor's Personnel;
 - (j) Implementation and monitoring of measures for health and safety management;
 - (k) Emergency response; and
 - (l) Accident relief.

1.6.5 The Contractor shall also consider the opinions of the Contractor's Personnel in preparing all Safety Plans or updated Safety Plans.

DCI: *Not the main plan it is too early, updates yes*

1.6.6 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.

1.6.7 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed of all hazards and risks on the Site.

1.6.8 The procedural flow of risk assessment shall be as follows.

- (1) Identifying hazards.
- (2) Evaluating risks.
- (3) Determining measures of risk reduction.

1.6.9 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:

- (1) Removal of hazards such as eliminating dangerous works.
- (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
- (3) Design/Engineering measures.
- (4) Management measures.
- (5) Use of PPE.

DCI: *NK Please clarify and discuss (3) and (4) within the context of engineer's design.*

1.7 Contractor's Health and Safety Officer at the Site and Other Safety Staff

DCI: *Health staff?*

1.7.1 Requirements for the HSO:

- (1) JICA require **Bidders** to name the HSO in the Bid (and thence Contract) and the Contractor shall assign that named HSO upon the Works, prior to the Commencement Date.
- (2) If the appointed person fails to act as HSO and is removed from the Site of the Works under the of GC 6.9 [*Contractor's Personnel*], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of **a another**-suitable replacement person to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor and not of a Subcontractor or consultant and unless otherwise stated in the Contract shall be assigned full time upon the Works and his/her responsibilities, authority and duties shall be in accordance with PC 6.7 [*Health and Safety*].

DCI: *MD to consider coordination of the above and following with Form BSD*

- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate qualification for such position if required by the Laws of the Country and also (if so required) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall be fluent in the language for communications stated in the Contract as

defined in GC 1.4 [*Law and Language*]. The HSO shall preferably also be fluent in the ruling language of the Contract (if different) however it is acceptable for the HSO to use a translator for this language only.

- (7) Where there is no legal requirement under the Laws of the Country for qualification, the HSO, shall have appropriate academic and health and safety qualification, work experience in construction (minimum 10 years) and in health and safety management (minimum 5 years which can be concurrent with construction experience) and whom the Contractor considers is qualified to perform the duties subject to receiving the consent of the Engineer.
- (8) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his/her duties.
- (9) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for HSO including additional managers, assistants and inspectors all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.
- (10) The HSO (where necessary with the assistance of his qualified support staff) shall personally be capable of ensuring that:
 - (a) All working areas of the Site are inspected on a regular basis (at least once every working day) to detect if any unsafe practices or conditions exist; and
 - (b) If such unsafe actions, practices or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this not possible then to temporarily stop all construction activity on that part of the Works until such action has been taken.

Such inspections attended by the HSO, may also include the attendance of the safety representative of the Engineer.

1.8 HSO – Scope of Duties

1.8.1 The HSO shall devote his/her full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.8.2 The particular scope of duties of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Work:
 - (a) Preparation of Safety Plans, implementation, evaluation, improvement, revision and submission thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) Provision of activity records in progress reports;

DCI: NK please clarify the meaning of the above?

(d) Regular inspection of the Works at the Site to ensure the Contractor's compliance with the Safety Plan;

(e) Temporarily stopping any parts of the Works following any accident or where the HSO discovers any unsafe conditions, unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan

- (f) Temporarily stopping or suspending the any parts of the Works where the Engineer so instructs in accordance with JSSS 1.16;
 - (g) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
 - (h) Preparing proposal, reporting and consulting with the Engineer including when an accident occurs or any risk or hazardous situation is likely;
 - (i) Appointment of health and safety inspectors and assistants after obtaining the consent of the Engineer; and
 - (j) Consultation on safety management with the Employer's Personnel.
- (2) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents.
 - (3) Checking the health status of the Contractor's Personnel.
 - (4) Planning and implementation of various training and education implementation plans.
 - (5) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases.
 - (6) Preparing regular internal and external reports on health and safety activities.
 - (7) Hazard prediction activity

DCI: NK for Kiken Yochi; see later clause 1.13.

1.9 Contractor's Health and Safety Committee

1.9.1 The Contractor shall create an internal Safety Committee for the purpose of effective health and safety management.

1.9.2 Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors representatives, health and safety personnel, site staff.
- (7) Representative of Contractor's Personnel including workers on Site.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.9.3 The HSO shall be the chairman of the Safety Committee.

1.9.4 The Contractor shall hold a regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence;

- (d) Hazards, safety and health problems resulting from:
 - (i) Site inspections by HSO;
 - (ii) Issues raised by the representative of Contractor's Personnel;
 - (iii) Issues raised by Subcontractors; and
 - (iv) Issues raised by others.
- (e) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (f) Safety instructions received from the Engineer;
- (g) Items to be coordinated with police, fire department and other related organisations;
- (h) Compliance and registration requirements under the Laws of the Country;
- (i) Safety and health awards, media attention and the like; and
- (j) Other matters.

1.9.5 Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within 7 days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.10 Engineer's Regular Safety Meetings

1.10.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to make commitments on health and safety matters on behalf of the organisations that they represent:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence;
 - (d) Hazards, safety and health problems resulting from:
 - (i) Inspections by the Engineer and the Employer;
 - (ii) Site inspections by HSO;
 - (iii) Issues raised by the representative of the Contractor's Personnel;
 - (iv) Issues raised by Subcontractors;
 - (v) Issues raised by others;
 - (e) Status of resolution of previous problems;
 - (f) Items to be coordinated with police, fire department and other related organisations;
 - (g) Compliance and registration requirements under the Laws of the Country;

- (h) Safety and health awards, media attention and the like; and
- (i) Other matters.

1.10.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within 7 days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer with a further copy provided directly to JICA.

DCI: Please note above suggestion

1.11 Project Safety Committee

1.11.1 On larger Projects with multiple contract packages and contractors, if stated in the Bidding Documents for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.11.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.11.3 The Chairman of the Safety Committee shall be the Employer.

1.11.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.

1.11.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

1.12 Health and Safety Coordination with Other Contractors

1.12.1 Refer to GC 2.3 [*Employer's Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer, and
- (3) the personnel of any legally constituted public authorities,

... who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to (1) and (2) above, the Employer shall ensure that such personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] and GC 4.18 [*Protection of the Environment*].

In relation to (3) above the Contractor shall ensure that such personnel are fully informed of the Contractor's Safety Plan and shall liaise and agree with such authorities to ensure that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The

Contractor is therefore required to contact such other contractors directly and liaise with them to obtain all such other information and incorporate this into the Safety Plan.

When risks arise because of potential interactions between the Contractor and other contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Contractor shall take a positive role in ensuring the general principles of risk prevention and control are applied amongst all contractors involved.

1.12.2 The Bidding Documents shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.12.3 If the above circumstances apply, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;
 - (c) Accidents, injuries and measures to prevent any reoccurrence;
 - (d) Status of resolution of previous problems;
 - (e) Items to be coordinated with police, fire department and other related organisations;
 - (f) Compliance and registration requirements under the Laws of the Country;
 - (g) Safety and health awards, media attention and the like; and
 - (h) Other matters.

1.12.4 Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within 7 days after the meeting.
- (3) A further copy shall be included in the Engineer's monthly progress report.

1.13 Contractor's Health and Safety Management Activities

1.13.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.13.2 Health and safety management activities shall include (but are not limited to):

- (1) Overall Management Activities:
 - (a) Tasks of the Health and Safety Officer as described above;
 - (b) Arranging, chairing, attending meetings as described above and other internal contractor meetings including TBM;
 - (c) Attending pre-work meetings, pre-start meetings, schedule meetings; and
 - (d) Monitoring the implementation of the Safety Plan.

- (2) Management of Contractor's Personnel:
- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, toolbox meetings, providing general advice and instruction, specific instructions on individual works, safety confirmations, information to be conveyed etc.
 - (b) Instruction and management of traditional Japanese cleanliness safety campaign known in Japan as **5S ACTIVITIES** where:
 - Seiri** = sorting
 - Seiton** = tidying
 - Seiso** = cleaning
 - Seiketu** = cleanliness
 - Shituke** = discipline
 - (c) **KIKEN YOCHI TRAINING (KYT)** for hazard prediction training usually in TBM, where:
 - K** = kiken (hazard)
 - Y** = yochi (prediction)
 - T** = training
 - (d) Instruction and management of safety education and training.
 - (e) Instruction and management of various safety measures.

1.14 Monitoring

1.14.1 The Contractor shall develop and implement systems to ensure that compliance with the Safety Plan is monitored efficiently and transparently at all times, for which purpose the Contractor shall:

- (1) Create checklists for monitoring.
- (2) Carry out regular and irregular inspections.
- (3) Monitor failed, unsafe or non-compliant conditions.
- (4) Create files and safe storage systems for the monitoring records.
- (5) Copy all relevant information to the Engineer as requested by the Engineer.

1.15 Joint Site Safety Inspections

1.15.1 In addition to the Contractor's own daily Site Safety Inspections described above, the Contractor shall also conduct regular Joint Site Safety Inspections with the Engineer or (if appointed) the safety representative of the Engineer. Respective safety staff may also attend.

1.15.2 Frequency of Joint Site Safety Inspections shall be at least once a week.

1.15.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.

1.15.4 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within 7 days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.16 Safety Compliance Instructions of the Engineer

1.16.1. Without affecting or diminishing the Contractor's responsibility under PC 4.1 [*Contractor's General Obligations*] to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer will observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any work in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary preventive measures to comply with the Contract.

If any operations or work are considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such work under GC 8.8 [*Suspension of Work*] until the Contractor has taken preventive measures to ensure that no further risk exists.

If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or the part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and preventive measures have been formulated and proposed to the Engineer and implemented at the Site, to ensure that no such accident can reoccur.

1.16.2. The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.17 Procedures for Resumption of the Works

If the HSO has suspended any work in accordance with JSSS 1.8 or if the Engineer has issued an instruction under JSSS 1.16 and unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part thereof, shall be as follows.

- (1) The Contractor shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and cannot reoccur.
- (2) The Contractor shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within 7 days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within 14 days of the date of receipt or for the resubmitted proposal within 7 days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving 7 days' notice in writing of the resumption date.
- (5) The Contractor resumes the Works on the resumption date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

DCI: NK, please review and discuss the above carefully

1.18 Engineer's Safety Representative

DCI: (NK what is the future intention? Will a safety engineer be appointed in future on all Projects or will the Engineer act in this capacity? This may require revision of the Guidelines for the Employment of Consultants under Japanese ODA Loans.

This requires further discussion with JICA.

It may require a more detailed procedure; the following is an outline suggestion only This requires further coordination and development with other sections (e.g. scaffolding) so that joint safety and certification and “safe for use” procedures can be implemented if required) without affecting the Contractor’s overriding responsibility.

Please refer to Part C where I have made further reference.

I understood that JICA wanted the Engineer to somehow play a more proactive role so would like to discuss this with you to ascertain the future intentions.

- 1.18.1. On large Projects, the Engineer may appoint an assistant under GC 3.2 [*Delegation by the Engineer*] to be known as the Engineer’s Safety Representative (ESR) and who shall be responsible for health and safety within the Engineer’s organisation on Site and for monitoring the Contractor’s compliance with each contractor’s Safety Plan.
- 1.18.2. By written notice served under GC 3.2 [*Delegation by the Engineer*], the Engineer shall delegate authority to the Engineer’s Safety Representative to represent the Engineer in matters of health and safety at Site, to issue written instructions to the Contractor on matters of health and safety and monitor compliance with such instructions which shall include:
 - (1) Instructions requiring the Contractor’s compliance with the Safety Plan.
 - (2) Emergency instructions to Contractor to stop working where the Engineer observes accidents, near misses or unhealthy or unsafe conditions.
 - (3) Instructions requiring the Contractor to change the working methods at the Site to improve health and safety.
- 1.18.3. The Engineer’s Safety Representative shall cooperate and work closely with the HSO and will represent the Engineer on Joint Site Safety Inspections and also undertake independent and regular inspections of the Works at the Site.
- 1.18.4. The Engineer’s Safety Representative shall give safety compliance instructions to the Contractor in accordance with his/her delegated authority under GC 3.3 [*Instructions of the Engineer*].
- 1.18.5. The Contractor shall take corrective action within the time limit prescribed in the instruction, shall keep the Engineer’s Safety Representative fully informed on progress and shall report in writing when the corrective action is completed.
- 1.18.6. If the Bidding Documents state that the appointment of a full-time or part-time Engineer’s Safety Representative is not required (refer to **JSSS C1**), it is to be assumed that the Engineer shall act in this capacity.

DCI: *Communications require more thought and definition. Who is to issue and receive? Can be direct HSO and ESR?*

NK: *The ESR may be assigned as Full-time or concurrent safety supervisor. The Employer always hesitate to assign foreign safety expert because of cost. For enforcing JSSS, it needs experienced and competent safety engineer.*

DCI: *Can we please discuss further so I can understand what you want to do.*

NK: *All correspondence shall be made between the Contractor and the Engineer, not HSO and ESR as usual.*

DCI: *There may be a requirement for direct (urgent) communication on some safety issues.*

1.19 Safety Statistics

1.19.1. The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.19.2. Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, casualties, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes of them.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff, contents, frequency, participant, duration of safety education at site and safety event.
- (9) Others.

1.19.3. All data shall be in a format and content format and content to be approved by the Engineer.

1.19.4. The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.19.5. The data shall subsequently be compiled and included in the Monthly progress report.

1.20 Safety Reports

1.20.1. The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, improvement.
- (2) Joint Site Safety Inspections.
- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report can be submitted as an attachment to the Contractor's monthly progress report.

1.21 Health and Safety Records

1.21.1. The Contractor shall keep health and safety records for the following:

- (1) Accidents, fatalities, near-misses.
- (2) Meetings for safety and health management.
- (3) Monitoring of safety and health management activities.
- (4) Health and safety education and training for the Contractor's Personnel.
- (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.

1.21.2. All records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer.

1.22 Proper Placement of Contractor's Personnel

1.22.1. Further to compliance with GC 6.9 [*Contractor's Personnel*], the Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.

The HSO shall countersign all such records to indicate his/her confirmation of the suitability of each member of the Contractor's Personnel prior to their placement.

These records shall be made available for inspection by the Engineer.

1.22.2. Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor in consideration of:

- (1) Work content and work environment.
- (2) Work experience, qualification and capability.
- (3) Health condition upon commencement of employment.
- (4) Health condition on a regular basis before daily work starts.
- (5) Allocation of an achievable and safe work volume.
- (6) Allocation to workers under 18 in accordance with GC 6.21 [*Child Labour*].

1.23 Placement and ID of Personnel for Works Requiring a License

1.23.1. If for any of the operations at Site, the Laws of the Country require operating, supervising or any other Contractor's Personnel to have a licence, particular qualification, registration or certification the Contractor shall ascertain that all such Contractor's Personnel possess and maintain such documentation.

1.23.2. The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and shall independently test all personnel to ascertain that they do possess sufficient knowledge, qualification and skills.

1.23.3. The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that he resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site unless otherwise approved by the Engineer and assigning a suitable replacement.

1.24 Health and Safety Education and Training

1.24.1. The Contractor shall conduct health and safety education and training for all of the Contractor's Personnel.

1.24.2. The Contractor shall include in the Safety Plan the outline of the education and training plans (participants, time, teaching materials, policy of selecting educators and trainers). In addition, the Contractor shall submit full details of such education and training to the Engineer for his information before the start of such education and training.

1.24.3. Education and training shall be provided free-of-charge to the trainees, conducted during normal working hours, trainees shall be paid and the Contractor shall bear all necessary expenses.

1.24.4. Safety induction: For general education and training of new entrants upon the Site and those who are scheduled to change work type, skill or location, the following subjects shall be included:

- (1) Chain of command and means of communication for the work.
- (2) Hazards or dangers due to the use of machinery, equipment, raw materials, etc., and methods of dealing with such hazards or dangers.
- (3) Performance and handling methods of safety devices and PPE with practical on-Site demonstration.
- (4) Hazardous substance control devices with practical on-Site demonstration.

DCI: - to be coordinated later

- (5) Working procedures generally.
- (6) Inspection before starting any work.
- (7) Maintaining an orderly, tidy and clean Site.
- (8) Emergency measures and evacuation at the time of accidents, etc.
- (9) Health and safety rules.
- (10) Causes and prevention of diseases that may occur in relation to the work concerned.
- (11) Other matters necessary for health or safety related to the work concerned.

1.24.5. For education and training of Contractor's Personnel who are planned to be assigned to dangerous or harmful work (for example as listed in Annex 2), such Contractor's Personnel shall be given the same general education and training as above plus further special education and training pursuant to the work in which such Contractor's Personnel are to be engaged.

NK: Dangerous and harmful works here can be limited to those in Annex 2, not such dangerous works with hand tools.

The intention of this clause is to clarify works that needs special knowledge and skill, which are specified in Japan.

DCI: Can we please discuss further as whilst I understand that there are specified training requirements in Japan these are different outside Japan.

Please also refer to our comments on Annex 2

The Contractor shall determine the educational subjects and teaching hours for the special education and training *with reference to Annex 3*.

Special education for the work concerned may be omitted in full or in part for any Contractor's Personnel who the Contractor has ascertained, holds valid qualification issued by an acknowledged public organisation of the Country and who has finished comprehensive training by the public organisation of the Country or acceptable training in another country and whom the Contractor ascertains as having equivalent and sufficient knowledge and skills for all or part of the special education.

1.24.6. For education and training of Contractor's Personnel who are to be appointed as Operation Leaders *(for example as listed in Annex 4 and 5)*, such personnel shall be given the same general education and training as above plus further special education and training pursuant to the work in which such personnel are to be engaged.

The Contractor shall determine the educational subjects and teaching hours for the skill-

training course with reference to Annex 5.

Special education for the work concerned may be omitted in full or in part for any Contractor's Personnel who the Contractor has ascertained, holds valid qualification issued by an acknowledged public organisation of the Country and who has finished comprehensive training by the public organisation of the Country or acceptable training in another country and whom the Contractor ascertains as having equivalent and sufficient knowledge and skills for all or part of the special education.

DCI: *NK – This requires further clarification and discussion*

1.24.7. Education and training personnel

Educators and trainers can be Contractor's Personnel who are experienced, academically qualified and (if legally required) registered as educators and trainers under the Laws of the Country, fluent in the language of the Country or external educators and trainers similarly qualified, registered and fluent.

In case of absence of availability of such suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary qualification, ability and experience, subject to receiving the advance consent of the Engineer.

1.24.8. Records of education and training

The Contractor shall create and store records of trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.24.9. Explanation of health and safety rules to persons other than the Contractor's Personnel

The Contractor shall provide general health and safety education courses to the Employer's Personnel and to any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed

1.25 Emergency Response Plan

1.25.1. The Contractor shall prepare an Emergency Response Plan as a part of the Health and Safety Plan in order to promptly and appropriately respond to natural disasters, fires, and other emergencies that may occur during construction.

DCI: *NK please note:*

Natural disasters include typhoons, earthquakes etc. which are actually GC 19 Force Majeure situations for which, the contractor is not responsible and he has no obligation to give any such automatic "response".

What is the actual required extent of the Contractor's "response"? What manpower and equipment is he to provide? How can this be predicted and estimated?

What about the Employer's and Engineer's own plans and what about the availability of the rescue services etc. in the Country?

These arrangements appear to be onerous upon the Contractor and of not properly worded may cause difficulty with interpretation of force majeure.

Can we please discuss and consider this further to understand the purpose and intention.

We have edited the following to make it readable but do not agree with the content.

NK: *We specified for the natural disasters which is not GC 19 Force Majeure situations. We expect the Contractor to prepare the natural disaster which may be occurred by the weather or earthquake of magnitude between bad weather and earthquake, and Force Majeure situations. The bad weather and earthquake are specified in JSSS 2.7 Measures against Adverse Weather and Earthquakes, which I want to send it in English you soon.*

DCI: *I will wait to receive your document on this subject so I can understand your intentions.*

In addition, the Contractor shall fully inform the Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed, of the detail of the Emergency Response Plan. The Contractor shall also establish an emergency call system and carry out training based on the Emergency Response Plan.

The Emergency Response Plan, shall include the following items:

- (1) Expected types of emergency situation.
- (2) Description of the emergency call system.
- (3) Explanation of the specific measures for emergency response.
- (4) Measures for quickly establishing locations of affected Contractor's Personnel, defining assembly points and the like.
- (5) Provisions for immediate changes and revisions to be made in response to changes in the Site situation

The Emergency Response Plan shall be submitted to the Engineer as part of the Safety Plan and be updated as necessary throughout the Time for Completion of the Works.

1.25.2. The Contractor shall establish an emergency call communication system that will require confirmation from all contact official departments, organisations and persons in the event of an emergency. This shall include the creation of an emergency contact list, which shall be posted it in a visible location such as the Contractor's Site office to inform all Contractor's Personnel.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel.
- (2) Relevant government authorities and agencies: administrative agencies, police stations and fire stations etc.
- (3) Contractor's Personnel at the Site.
- (4) Other contractors engaged upon the Site or the Works

1.25.3. The Contractor shall conduct emergency response training based on the Emergency Response Plan which shall include:

- (1) Implementing a training programme at least every six months
- (2) Improving the emergency response plan based on training results
- (3) Providing details of the emergency response

The Contractor shall provide training for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed

Details of the training shall be included in the Emergency Response Plan and Safety Plan.

- 1.25.4. If and when an emergency occurs during the Time for Completion, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.
- 1.25.5. The Contractor shall take measures such as the placement and installation of the following accident relief facilities and equipment, medical personnel, ambulances, etc.

DCI: NK please see above queries, the Contractor usually has no such obligations for force majeure events, so if this is required it must be fully specified and paid for. Usually only the use of existing site facilities is allowable technically in accordance with the Engineer's Instructions (and payment by Employer).

NK: As I explain above, the Contractor shall prepare the plan for predictable weather, earthquake and others from the Contractor's experience.

DCI: This may complicate interpretation contractually where force majeure has accepted definition. In most countries, earthquakes are not so common and extreme weather likewise. Please can we discuss

DCI: We assume that the following described in the draft as "Emergency Relief Plan" actually means a plan for dealing with common accidents on the Site. This heading is a little misleading, I suggest change to something like "Accident Relief Plan" so there can be no confusion with "Emergency Response Plan"

1.26 Accident Relief Plan

- 1.26.1. The Contractor shall prepare an Accident Relief Plan in consideration of the nature and timing of the Works and the location(s) of the Site and taking account at least of the minimum facilities and measures to be provided in accordance with the Specification for the Contract (refer also to JSSS C1) and including:

DCI - To be coordinated with Part C and Health

- (1) Availability of medical personnel who can provide first aid and additional medical assistance.
- (2) Availability of vehicles and drivers that can properly transport casualties to clinics on Site or hospitals off the Site.
- (3) Establishment of first aid room, clinic or like facilities on Site with equipment and consumables.
- (4) Arrangement of communication facilities and measures for emergency response.
- (5) Deployment of appropriate first aid appliances, aids, instruments and medicines.
- (6) First aid training, appointment of first aiders and dissemination of information.

It is to be noted that JSSS C1 lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.

1.27 Measures at the Time Accidents Occur

- 1.27.1. When an accident occurs, the Contractor shall immediately discontinue the work task and implement the following measures as necessary.
- (1) Safely locate and extract casualties and provide first aid and other accident relief measures
 - (2) Secondary accident prevention activities
 - (3) Preserve the accident site, make safe and prevent anyone interfering or entering

- (4) Discontinue construction work related to or in the vicinity of the accident
- (5) Implement any further measures instructed by the Engineer

1.27.2. Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident or illness in accordance with PC 4.8 [*Contractor's Health and Safety Obligations*].

DCI: NK, can we please attach an accident report form now? As an appendix, please let me have a draft and I will include

- (2) Having investigated and established the cause of any accident or illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures to prevent any reoccurrence.

For resumption of work procedures, refer to JSSS 1.17

1.28 Health Issues

DCI: What about health issues? The document is largely silent on this yet statistically this is the biggest problem

NK: May I know what kind health issues you commented. We specify health issues such as dust, noise, heat are specified in JSSS 2.1 Working site environment.

NK: Do you mean if the health issues are asbestos, dusts including silica and lead, chemicals, sunlight, diesel engine exhaust emissions, frequent loud noise, frequent or excessive use of vibrating tools, frequent or excessive manual handling of loads, stress and fatigue.

DCI: Yes in part answer to your question and also health issues at Site in terms of what shall be provided as a guide and also:

Contractor should provide (or ensure) eyesight and hearing exams that do have a significant effect on safety and other mobility and medical tests that are reasonable, all to be stated in JSSS.

We should not rely on local Laws but should stipulate health requirements to make sure that the contractor complies with this.

This will also require the Contractor to assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.

NK: We specify in 2.1 about dusts, noise and temperature. We do not specify about asbestos because the Laws of the country may have specified already and ODA projects may not handle asbestos except renovation works.

DCI: We surely cannot rely on local laws that in general JSSS is aiming to improve.

Renovation works occur frequently

NK: Do you have any suggestion about health issues?

DCI: See above.

This also requires research of other standards but what about medical facilities on Site, medical tests and also treatment of endemic diseases in certain countries. AIDS is covered in FIDIC (although not so necessary now perhaps) but what about others? Malaria nets, dengue patrols (Singapore style) etc. etc..

Also state criteria for provision of facilities at Site for example say related to the distance

from Site to the nearest hospital. If say more than one hour provide a doctor(s) full time plus medical support plus nurses and reasonably equipped ambulance with driver.

Plus also same doctor and nurses may be able to provide a local JICA clinic?

All of the above requires coordination with GC 6.8 but more clarity will be helpful as the present clause is frequently not applied properly.

Can we discuss further please, noting that this should really come from NK.

What do the Japanese regs. require?

The documents need to be comprehensive and helpful.

NK: JSSS will be prepared at 2 stages. The 1st stage JSSS will cover the following table for basic and essential safety requirement and the 2nd stage will do for safety in sectors of road, river, tunnel, railway, etc.

DCI: Please can we discuss later, I am not sure if or how your ideas for later issues will work.

1.29 Temporary Works

DCI: The following are draft notes which in the main will probably be transferred and dealt with later in JSSS Chapter 7.1 but some reference may be necessary here.

Please leave this here for now and we will coordinate this (and other parts) later. There is cross-reference to this clause in Part C.

NK: I will send you 7.1 as soon as possible JICA gave us their draft of JSSS.

DCI: Please note that I have not changed any part of the following paragraph (except as highlighted in green) as I am waiting receipt of your further draft.

The Contractor shall provide details at Bid stage (not calculations necessarily at this stage?) of all Temporary Works (TW) designs including Falsework for significant structures as listed in the Bidding Documents (refer to JSSS C1) and including for example:

- (1) Falsework equal to or higher than 3.5 m.
- (2) Overhead passage equal to or higher than 10m (bridge?)
- (3) Scaffolds ("scaffolding"?) equal to or higher than 10m can engineer check scaffolding design?.
- (4) Other TW specified in the Contract or instructed by the Engineer.

DCI: NK can we please discuss the above to clarify these and further requirements after which we will delete or re-word this

What about other items such as TW for major bridge structures, tunnels, coffer dams, temporary dams, etc. ??

What is the Engineer required or intending to do with such information?

NK: The Engineer can review design document by the Engineer's design expert if he is assigned. If not, the Engineer shall review the design procedure and designs with his experience of TW.

DCI: We suggest that this could be dangerous as reliance needs to be placed upon the Contractor's specialists not the Engineer. The check (if any) should be to ascertain that the Contractor has engaged and used such specialists. The Engineer does not (and should not) represent himself as an expert on temporary works (Falsework) design.

Also if calculations and methods are submitted at Bid stage it could well be construed that they have been checked and accepted by the Engineer (otherwise why request them?) and if future failure occurs responsibility may be affected. Similarly if a future change say for compliance is instructed by engineer, variation may be claimed and responsibility may well also be compromised

Please let me study the future document when we receive it and I will then discuss further.

DCI: I recommend consideration of something like the following, which is still very much a draft idea for now. Please note my further suggestion that it is made optional in Part C for use on particular (not all) projects.

I still need to study this BS further.

Please also refer to separate definitions of Falsework, Formwork and other terms above.

- 1.29.1. Unless otherwise stated in the Bidding Documents, Bidders are required to comply with BS5975: 2019 Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.
- 1.29.2. The requirement for specifying compliance with BS5975: 2019 in the Bidding Documents by a Project Executing Agency shall be determined by the extent and nature of the Works, Temporary Works and in particular the extent and nature of Falsework and Formwork design. JICA recognise that the requirement may be greater on larger or more complex Works particularly those with a high content of Formwork and Falsework containing proprietary equipment and/or traditional structural and scaffolding solutions, which are:
 - (1) Designed to support excessively heavy loads.
 - (2) Of excessive height or unusual shape,
 - (3) Of difficult access, or
 - (4) With unusual structural solution.
- 1.29.3. Other alternative internationally accepted standards are also acceptable if approved by the Engineer but only if such standards contain equivalent requirements for management of Temporary Works including the design of Falsework (including Class A Falsework).
- 1.29.4. It is to be noted that BS5975: 2019 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975:2019 and shall submit such justification to the Engineer for his information and consent.
- 1.29.5. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.
- 1.29.6. Where the Bidding Documents state that BS BS5975: 2019 is to apply, the Contractor shall appoint at least the following principal specialist staff who will be dedicated to the Temporary Works:
 - (1) Temporary Works Coordinator (TWC): responsible for ensuring the preparation and implementation of effective procedures and who shall retain overall responsibility for all Temporary Works on the Site including the Temporary Works of Subcontractors. The Contractor shall not use the TWC or other personnel of Subcontractors to act as his TWC.
 - (2) Temporary Works Designer (TWD): responsible for preparing the design of all Temporary Works (including any Falsework).
 - (3) Temporary Works Supervisors (TWS): responsible for the construction, safe use, maintenance, dismantling and removal of all Temporary Work in accordance with the design and the requirements of the TWC and TWD and for providing the HSO with the following information to permit further actions:
 - (a) Confirmation that the Temporary Works have been erected in accordance with the design and that such Temporary Works and ready to accept loading; and

- (b) Confirmation that the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works.

1.29.7. The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed and completed in accordance with BS5975: 2019 and the Contract. All such records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer

1.29.8. The TWC, TWD and TWS shall be appropriately qualified and experienced and the TWC and TWD shall be named in the Bid and hence the Contract. The TWD can be either Contractor's Personnel or an appropriately qualified and experienced specialist Subcontractor to be named in the Bid or be subsequently consented to by the Engineer.

1.29.9. Procedures for the appointment and any replacement of the TWC, TWD or TWS shall be the same as described for the HSO in JSSS 1.7.

1.29.10. The Executing Agency (via their consultant) during the design stage shall consciously endeavour to remove or reduce risks in the Permanent Works as far as possible through the design process for example by changing high level in-situ concrete structures to precast or prefabricated structures, simplifying structures and applied finishes, services and the like.

1.29.11. Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and where possible shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The following clause requires particular and careful consideration and internal discussion.

1.29.12. The Contractor shall submit method statements for parts of the Temporary Works (including designs and calculations of Falsework) as may requested by the Engineer under the Contract for his review.

The Engineer's review shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer has no obligation under the Contract to review Temporary Works design however he may choose to do so for those parts which he may consider to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task. The Engineer shall have no obligation to issue any response or comment, however if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1(c) and issued without prejudice to the Contractor's overriding responsibility for the adequacy of the Temporary Works.

1.29.13. Where the Bidding Documents do not require the Contractor to comply with BS5975: 2019, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the provision, use, management, dismantling and removal of Temporary Works including for example by ensuring the following:

- (1) Appointment of appropriately qualified and experienced staff.
- (2) Preparation of an adequate Temporary Works design.
- (3) Independent internal or external checking of the Temporary Works Design.
- (4) Preparation of a Temporary Works register and records
- (5) Pre-erection inspection of all Temporary Works materials, components and equipment.
- (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the temporary works, including procedures to:

- (a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO of a formal “permit to load”; and
- (b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO of a formal “permit to dismantle” where necessary.

1.29.14. The Safety Plan shall include measures to ensure that the design, erection, maintenance, dismantling and removal are all carried out by competent and experienced individuals and in a controlled and closely supervised manner.

1.29.15. Whether there is or is not any legal requirement under the Laws of the Country for qualification, all of the Contractor’s Temporary Works staff and any specialist Temporary Works Subcontractors shall have appropriate academic and Temporary Works coordination, design or supervision qualification as appropriate, work experience in construction and in Temporary Works Design and whom the Contractor considers are qualified to perform the duties.

ANNEXES TO PART B: JICA REQUIREMENTS

Annex B.1: Items to be described in the Safety Plan

DCI: *NK please note that text generally has been changed from original so that this is coordinated with other changes basically to make it work better.*

Further MD coordination with Part C is required where this is largely repeated

Coordination is also required in future for all other Technical Sections 2 onwards (e.g. health) where further requirements may make revision here necessary.

(1) Description of the Works

A description of the Works in outline and with overall layout plan to give an understanding of the overall layout and content of the Works showing main construction items and areas, roads, road access locations, working areas, storage areas, temporary offices, laydown areas, warehouses and the like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site and showing the responsibility and authority of all other Contractor's Personnel involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country to be complied with for the health and safety management of the Works, unless superseded by JSSS. If superseded by JSSS then the relevant Clause or Sub-Clause number of JSSS shall be inserted.

(5) Bidder's Safety Certification and Implementation Policy

NK see query in JSSS 1.5 and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under JSSS Cl.

The following Sub-Clauses have also been added to JSSS Chapter 1.

Unless otherwise expressly stated in the Bidding Documents, Bidder's shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

An authorised true copy of the current certification shall be provided in this part of the Bid and shall subsequently be included with the Contract.

(6) Temporary Works

NK this requires to be added as it is an essential part of the Safety Plan

Description of the arrangements for controlling risks arising from the use of Temporary Works by ensuring that the requirements of JSSS 1.29 are fulfilled.

~~(7) Safety Measures for Contractor's Equipment and Temporary Works~~

Requires changing due to the above added Sub-Clause

A description of the procedures for inspecting and maintaining Contractor's **Equipment and Temporary Works together with all spare parts including inspections prior to shipment**, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(8) Health and Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(9) Plans for Health and Safety Education and Training

An outline description of the proposed education and training methods and facilities including participants, time, teaching materials, policies for selecting educators and trainers, etc. and covering safety induction.

(10) Deployment of Health and Safety Related Facilities and Personal Protective Equipment (PPE)

A description of the intended policies for the deployment of facilities and equipment to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general Personal Protective Equipment (PPE) and the use of additional PPE for particular working conditions and environments.

(11) Health and Safety Rules

A description of the general health and safety rules (e.g. limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site.

If a specific work area, condition or environment (such as operational areas, hazardous areas, Confined Spaces or the like) requires detailed rules, this shall be stated and detail will be developed in later issues of the Safety Plan.

(12) Site Safety Inspection Plan

A description of the methods for on-Site inspections showing locations and frequency. The description shall also include the methods for reporting, recording and utilising results.

Also attaching warning notices and labelling hazardous equipment, structures and the like?

(13) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any other trespassers upon the Site will be prevented. The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.

(14) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

(15) Prevention of Construction Accidents at Site

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(16) Emergency Response Plan

A description of the Emergency Response Plan including the action plan for rescue of casualties in an emergency such as when a major accident or disaster occurs, work discontinuation, notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.

(17) Accident Relief Plan

A description of the Accident Relief Plan including the procedure for first aid at the location and time of any accident and a description of appropriate medical facilities to be provided at the Site, including for example nurse, doctor, ambulance etc. all as stated in the Bidding Documents. The procedure shall also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(18) Facilities for Maintaining the Occupational Health Environment

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

(19) Work Discontinuation Criteria

DCI - Needs later coordination with other sections:

A description of the proposed criteria for discontinuation by HSO of work for example when danger is predicted for work due to strong wind, heavy rain, snow or other factors

(20) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings, 5S and KYT activities (refer to JSSS 1.13)

(21) Legal Remedies and Requirements after Occupational Accidents

A description in brief of the legal requirements and remedies in the case of injuries and death at work and for personnel affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

Annex B.2: Dangerous or Harmful Operations

DCI: *I have concerns about whether the information in the following annexes is of any value in an international context, I think not. In a domestic Japanese sense these requirements are of course very important as they are integrated with many other Japanese laws and regulations. However when abbreviated extracts only are included it does not have great meaning and there appears to be much missing which may not be covered by the fall-back (OSHA).*

Please consider all very carefully.

I am inclined to suggest that a simple basic requirement such as GC 6.9 is sufficient, perhaps adding some reference to training and making the contractor responsible for all is probably better than going into so much detail for only a part.

NK: *we will reconsider and discuss with JICA about Annex 2.*

The following is a list of **sample** work types **classified/defined** as “Dangerous or Harmful Operations”

DCI: *Is this Annex intended to be a definition?*

When Contractor’s Personnel are engaged in the following or other potentially dangerous or harmful operations such personnel shall be given special health and safety training appropriate to the operations concerned.

Examples of such operations include (but are not restricted to) the following:

(as provided for by the Ordinance of the Ministry of Health, Labour and Welfare).

DCI: *I requested a complete list at our last meeting however, according to the above Ordinance there are many more operations and requirements in addition to this list and also as this effectively applies only in Japan; is therefore a real need for this?*

- (1) Crane operation and mobile crane operation
- (2) Welding and cutting of metal using arc welder *what about gas welders and cutting machines?*
- (3) Forklift operation
- (4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: ~~3t or more~~) *why 3t or more? Why not all?*

DCI: *Vehicle-type? What does it mean exactly? Does it mean wheeled? If so how about tracked equipment? What is the difference between (4) and (5)?*

- (5) Vehicle-type construction equipment operation (for foundation work: ~~3t or more~~)

DCI: *why 3t or more? Why not all? what about track type?*

- (6) Roller operation *what type?*
- (7) Operations that use organic solvents

DCI: *what about other harmful substances and explosives for example?*

- (8) Sling work

DCI: *meaning hoisting and rigging work*

- (9) Rope access work

DCI: *cradles and hoists?*

- (10) Work to be performed using a full harness type of fall protection device where the height is 2 meters or more and it is difficult to provide for the work floor

DCI: *meaning of difficult? Too expensive? Is this coordinated with other chapters?*

What about small tools (drills and angle grinders) all electrical works, gas pipe works etc. etc.?

Ditto related academic educational achievements?

And Confined spaces?

NK: we will reconsider and discuss with JICA about Annex 2.

Annex B.3: Subjects of Special Education for Dangerous or Harmful Operations

DCI: Please note that this still needs English edit and correction, some commented on below, but problem exists throughout.

When Contractor’s Personnel are engaged in the following or other potentially dangerous or harmful operations such personnel shall be given special health and safety training appropriate to the operations concerned.

DCI: Is this “health and safety training” or “skill training”?

It appears to be operator skill training? Is this the purpose?

Can this apply internationally?

Examples of special training for the above listed sample operations include (but are not restricted to) the following:

- (1) Special education for crane operation and mobile crane operation:

DCI: Surely this is common to all crane operations why particularise one type? Or training should be specific for the types of crane being operated on Site.

Subject	Scope
1 Knowledge of mobile and other cranes	Type and model, main structural parts, operating device, safety device, brake function, handling method, method of inspection and maintenance
2 Knowledge about motor and electricity	Internal combustion engine, steam engine, hydraulic drive, danger from electric shock
3 Knowledge of mechanics necessary for operation of mobile crane and other cranes	Force (composition, decomposition, balance and moment), centre of gravity, load, wire rope, hook and hook strength, relationship between wire rope application and load
4 Practical skill	Method of mobile crane and other crane operation Signs for mobile crane and other crane operation

DCI: What is the extent of “practical skill training” and others above, is it testing to ascertain of skills exist?

- (2) Welding and cutting of metal performed using arc welder

DCI: Gas welding also?

Subject	Scope
1 Knowledge of arc welding etc.	Basic theory of arc welding, basic knowledge about electricity
2 Basic knowledge on arc welding equipment	DC arc welder, AC arc welder, automatic electric shock prevention device for AC arc welder, welding rod and rod holder, wiring
3 Knowledge of arc welding work methods	Inspection and maintenance before work, methods of welding and cutting, inspection of welds, post-work measures, accident prevention

4 Practical skill	Handling of equipment for arc welding work
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(3) Forklift operation

Subject	Scope
1 Knowledge of equipment structure and handling methods for the travel of a forklift. <i>What is the meaning of this?</i>	Structure and method of handling for forklift engine, power transmission device, traveling device, steering device, braking device, auxiliary device for traveling
2 Knowledge of equipment structure and handling methods for cargo handling <i>What is the meaning of this?</i>	Structure and handling method of hydraulic equipment (including safety valve), head guard, backrest, auxiliary devices for cargo handling, method of inspection and maintenance
3 Knowledge of mechanics necessary for forklift operation	Force (composition, decomposition, balance and moment) weight, centre of gravity and stability of objects, speed and acceleration, load, stress, material strength <i>This appears to be excessive for the average fork lift driver?</i>
4 Practical skill	Operation of traveling, operation of cargo handling

(4) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging: 3 t or more)

Meaning see before also?

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods motors for vehicle-type construction equipment (for ground levelling, transportation, loading and digging), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance
4 Practical skill	Operation of traveling, operation of equipment for work

(5) Vehicle-type construction equipment operation (for foundation work: 3 t or more)

Less than 3t also?

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods of motors for vehicle-type construction equipment (for foundation work), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for foundation work), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for foundation work), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance
4 Practical skill	Operation of traveling, operation of equipment for work

(6) Roller operation

Subject	Scope
1 Knowledge of roller	Types and applications of rollers, structure and handling method of Power transmission devices of rollers, working devices, steering devices, brakes, electrical devices, alarm devices and auxiliary devices, method of inspection and maintenance
2 Knowledge of general matters required for roller operation	Mechanics necessary for operation, construction method by roller
3 Practical skill	Roller operation method

(7) Operations that use organic solvents

Include here within equipment and only solvents, no other chemicals or hazardous substances?

Subject	Scope
1 Work environment management	Method of maintenance and inspection of equipment for venting prevention measures of organic solvent vapour and equipment for ventilation, Grasp and maintain the working environment
2 Work management	Work management method, occupational health protective

	equipment
3 Health management	Types and hazards of organic solvents, operations using organic solvents, health hazards caused by organic solvents, prevention methods and first-aid measures, medical check-up and follow-up measures
4 Accident case	Accident cases and prevention measures

(8) Sling work

Subject	Scope
1 Knowledge of cranes, mobile cranes, other cranes and derricks (hereinafter referred to as "cranes etc.")	Type and model, structure and function, safety device and brake
2 Knowledge of mechanics necessary for slinging work	Force (composition, decomposition, balance and moment), centre of gravity of simple figures and stability of objects, friction, weight, load
3 Method of slinging	Selection and use of the sling tool, basic work action (including safe operation method), method of signalling
4 Practical skill	Signs for operation, work with a sling for a crane

(9) Rope height work

Subject	Scope
1 Knowledge of rope height work	Method of rope height work
2 Knowledge about main ropes etc.	Types of main ropes, structure, strength and handling methods, methods of inspection and maintenance of main ropes, etc.
3 Knowledge about prevention of occupational accidents	Measures for the prevention of occupational accidents caused by the fall, methods of using, maintaining and inspecting safety belts and protective helmet
4 Practical skill	Method of rope height work, inspection of main rope etc.

(10) Work to be performed using a full harness type of fall prevention equipment where the height is 2 meters or more and it is difficult to provide for the work floor

Subject	Scope
1 Work knowledge	Types of equipment used for work, structure and handling methods, methods for inspecting and maintaining equipment used for work, methods of work
2 Knowledge of fall prevention equipment	Types and structures of full harnesses and lanyards for fall prevention equipment, methods for mounting the full

(limited to full harness type, the same shall apply hereinafter)	harnesses, installation and selection methods for lanyards, methods of inspection and maintenance of fall prevention equipment, how to use the related equipment for fall prevention equipment
3 Knowledge about the prevention of occupational accidents	Measures to prevent occupational accidents due to fall, measures to prevent hazards due to falling objects, measures to prevent electric shock, methods of using protective helmet and methods of maintenance and inspection, and other accident due to work and its preventive measures
4 Practical skill	Method of using fall prevention equipment

Annex B.4: Work Requiring the Assignment of an Operation Leader

The following is a list of example work types that require the appointment and assignment of an Operation Leader to each team of workers engaged upon such work at the Site.

There are many more

Such Operation Leaders shall be given special health and safety training appropriate to the operations concerned.

Examples of operations shall include (but are not restricted to) the following:

- (1) Earth excavation and shoring work
- (2) Tunnel excavation work
- (3) Tunnel lining work
- (4) Excavation work for quarrying
- (5) Formwork, Falsework, supports and shoring assembly/dismantling work
- (6) Scaffolding assembly/dismantling work
- (7) Steel frame fabrication and erection work on buildings and structures
- (8) Steel bridge fabrication and erection work
- (9) Wooden, masonry and other building work
- (10) Demolition work of concrete, masonry or steel structures
- (11) Reinforced concrete construction work
- (12) Organic solvent work and other hazardous substances or materials
- (13) Work in hazardous areas
- (14) Work in Confined Spaces

Annex B.5: Subjects of Skill Training Course for Operation Leaders

DCI: Skill training is included for operation leaders but no such skill training or checking is included for other skilled persons is this correct?

Is this “training” or checking to ascertain that operation leaders have the skills?

If “Operation Leaders” (see out earlier assumed definition based on JICA scop) include foremen, gangers, charge hands and the like in other countries, and if they are already qualified and paid as foremen, gangers, charge hands and the like, do they need to be re-trained and re-qualified as follows?

These appear to be very detailed training requirements.

This Annex requires significant coordination with Annex B.4, with addition and editing before it can be finalised but is it necessary? Any changes in Annex B.4 need to be added here.

Add work in hazardous areas and work in Confined Spaces

Examples of special training for the operations leaders shall include (but are not restricted to) the following:

- (1) Operation Leader for Earth excavation and shoring work

Not edited:

Subject	Scope
1 Knowledge of work method	Method of ground excavation, treatment of loose rocks and buried objects, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock, and the type, material, structure, assembly drawing, maintenance and inspection of earth shoring, matters related to installation and removal of strut and wailing
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases, measures for preventing hazards, collapse prediction, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

- (2) Operation Leader for tunnel excavation work

Subject	Scope
1 Knowledge of work method	Method of tunnel excavation, mucking, and types, structure and method of assembling of tunnel support, method of installing rock bolts
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases and toxic gases, measures for preventing hazards
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(3) Operation Leader for tunnel lining work

Subject	Scope
1 Knowledge of work method	Types, materials, structure and assembling drawings, inspection and repair of tunnel support, method of assembling and dismantling tunnel support
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, instruments and tools, measures for preventing hazards, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(4) Operation Leader for excavation work for quarrying

Subject	Scope
1 Knowledge of rock types, drilling methods for rock excavation, etc.	Types of rock, method of excavation for extraction of rock, treatment of loose rock, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, harmful gases, measures for preventing hazards, collapse prediction, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(5) Operation Leader for formwork, Falsework, supports and shoring assembly/dismantling work

Subject	Scope
1 Knowledge of work method	Types and materials of form and form shoring, structure of form shoring, assembly drawings, inspection, etc. Methods of assembly and dismantling of form and frame shoring
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(6) Operation Leader for scaffolding assembly/dismantling work

Subject	Scope
1 Knowledge of work	Types of scaffolds, materials, structures and assembly

method	drawings, methods of scaffold assembly, disassembly and change of work, inspections and repairs. Matters of structures and methods assembly, disassembly and changes of climbing bridges, protective shelf, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, measures for preventing danger, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(7) Operation Leader for steel frame fabrication and erection work on buildings and structures

Subject	Scope
1 Knowledge of work method	Types of buildings and towers, materials, structures, design drawings, shop drawings, equipment and tools, methods of work for assembling steel frames of buildings, etc., inspection
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(8) Operation Leader for steel bridge fabrication and erection work

Subject	Scope
1 Knowledge of work method	Types of bridges, materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(9) Operation Leader for wooden, masonry and other building work

Subject	Scope
1 Knowledge about constructing structural members of buildings, installing floors, roofs, etc.	Construction methods of main structural parts such as frame, floor structures, walls, construction methods of roof and outer wall foundation, joints, order of construction, reinforcement method for frame
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(10) Operation Leader for demolition work of concrete or masonry structures

Subject	Scope
1 Knowledge about structural members including concrete masonry and reinforcement etc.	Types, structures, construction method of concrete and masonry work, types of method of construction, method of work, work plan, coordination with m & e services etc
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
3 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(11) Operation Leader for reinforced concrete construction work

Subject	Scope
1 Knowledge of work method	Types of materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity
3 Knowledge about work environment	Equipment for fall prevention, measures to prevent hazards from falling objects, methods of work in adverse weather, clothing and protective equipment
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence

(15) Operation Leader for organic solvent work and other hazardous substances or materials

Subject	Scope
1 Knowledge of health hazards and their preventive measures.	Pathology, symptoms, prevention methods, first-aid measures and health problems caused by such materials
2 Knowledge for improving the work environment	Properties of organic solvents, and other hazardous substances or materials, management of equipment and other facilities related to production and handling of such materials, methods of evaluation and improvement of working environment
3 Knowledge of protective equipment	Type, performance, method of use and management of protective equipment pertaining to the production or handling of such materials
4 Knowledge about education for workers	Methods of education and guidance for workers, work standards, measures at the time of disaster occurrence <i>Meaning?</i>

JICA STANDARD SAFETY SPECIFICATION (JSSS)

CHAPTER 1: GENERAL REQUIREMENTS

PART C: REQUIRED AMENDMENTS TO “JICA STANDARD BIDDING DOCUMENTS”

[This Part C applies to Executing Agencies (employers and their consultants) for use in the preparation of PQ and Bidding Documents, evaluation of Bids and award of Contracts]

JICA advise that the amendments described will be made to the “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA), October 2012, version 1.1. (hereinafter referred to as “JSBD”).

The Bidding Documents for particular Projects where JSSS has become effective (as described in the above “Part A: Preamble Notes”), shall be drafted to take account of such amendments in advance of the publication of the updated JSBD, in accordance with the following instructions.

BIDDING PROCEDURES:

C1. Particular Safety Requirements:

Part 1 – Bidding Procedures, Section I: Instructions to Bidders, Section VI. Works Requirements, Specification, pages WR-3 to WR-5

Add the following additional text on page WR-5 to follow on from the existing text.

JICA Standard Safety Specification (hereinafter referred to as JSSS) contains detailed requirements for health and safety including procedural requirements for the preparation, submission, review and response processes for Method Statements and Safety Plans for the execution of the Works.

Care shall be therefore be taken when drafting Bidding Documents for Projects where JSSS is to be used to ensure that there is no duplication of the JSSS requirements in the Technical Specification¹ for such Projects. Unnecessary and duplicated reference **must** be avoided.

JICA stress the importance of the Employer putting in place a sound working environment for the Contractor and therefore Bidding Documents should include for example: reasonable Time(s) for Completion; reasonable, continuous and unobstructed access to the Site and sufficient Site area(s), working and storage areas, all wherever possible. Requirements shall be clearly described in the Bidding Documents.

It must also be recognised that JSSS constitutes a range of standard safety requirements that shall apply generally on their ODA Projects and consequently it is necessary to specify particular safety requirements for specific Projects. Such particular safety requirements shall be carefully and precisely drafted and included in the Technical Specifications of such Projects, covering for example the following²:

JSSS Chapter 1 Reference	Item
1.5 Contractor’s Safety Certification	State if Bidders are required to be formally accredited under OHSAS 18001 and if so require submission of a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or equivalent from an internationally recognised and approved

¹ To avoid any potential confusion with the “JICA Standard Safety Specification”, reference is made above to “Technical Specification” as this is the description used in JSBD although not in the FIDIC Conditions of Contract where this is defined as “Specification”.

² See also later checklist

	organisation
1.7 Contractor's Health and Safety Officer at the Site and Other Safety Staff	<p>(On small Projects) State if the HSO is <u>NOT</u> required to be assigned full-time on the Works.</p> <p>If not so stated in the Bidding Documents, contractors must assign full-time dedicated HSO and if applicable other support personnel.</p> <p>JICA advise that full-time assignment is the normal requirement and part-time or shared assignment is only allowable on very small projects with separate written justification to be provided by the Executing Agency to JICA.</p>
1.11 Project Safety Committee	<p>(On large Projects) State if a Project Safety Committee is to be established for the Project and add any further requirements.</p>
1.12.2 Employer's other contractors (see also GC 2.3)	<p>Describe the individual scope of Works for any other contractors to be employed by the Employer on the Site and where possible identify them by name together with any legally constituted public authorities who may be employed in the execution on or near the Site of any work not included in the Contract, and specify working locations, access and timing as far as possible.</p>
1.18 Engineer's Safety Representative	<p>(On large Projects) State if the Engineer will appoint a full-time or part-time Safety Representative as an assistant upon the Works or state if the Engineer will act in this capacity.</p>
1.26 Accident Relief Plan	<p>MD to Coordinate in future with 1.26, 1.28 Health and with other Sections</p> <p>Describe the minimum measures and facilities to be provided in consideration of the location(s) of the Site and the location, nature and timing of the Works, including:</p> <ol style="list-style-type: none"> (1) Medical personnel to provide first aid and additional medical assistance, at least certified as having successfully completed a first aid course by a recognised provider, such as the Red Cross and also including doctors and nurses where so required. (2) Suitably equipped ambulances or other approved vehicles, with drivers and attendants that are properly trained to transport casualties to medical personnel staff and facilities on Site or to medical staff and facilities including hospitals off the Site. (3) First aid room, clinic or like facilities on Site and specify equipment and consumables (4) Communication facilities and measures for emergency response (5) First aid appliances, aids, instruments and medicines. (6) First aid training, appointment of first aiders and

	<p>dissemination of information.</p> <p>(7) Include others as appropriate</p>
1.28 Health Issues	<p><i>requires further development, addition and coordination by MD</i></p> <p><i>Awaiting NK documents to ascertain scope.</i></p>
1.29 Compliance or otherwise with BS5975: 2019 Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework	<p><i>DCI - I suggest that non-compliance should be the exception rather than the norm.</i></p> <p>If it is necessary for Bidders to comply with BS5975: 2019 on the Works, the Executing Agency shall ensure that the Bidding Documents clearly state this. For this purpose, reference shall be made to the basic criteria described in JSSS 1.29.</p> <p>If Bidders are NOT required to comply with BS5975: 2019 on the Works, the Bidding Documents shall clearly state this, and separate written justification shall be provided by the Executing Agency to JICA.</p> <p><i>NK please refer to queries on this subject in 1.297</i></p> <p>If Bidders are required to comply with BS5975: 2019, the Bidding Documents shall confirm that the following Temporary Works coordination, design and supervision staff are required:</p> <ol style="list-style-type: none"> (1) Temporary Works Coordinator (TWC). (2) Temporary Works Designer (TWD). (3) Temporary Works Supervisor (TWS). <p>If compliance is required TWC and TWD, Bidding Documents should require them to be named in the Bid.</p> <p>JICA note that this (and more) can always be proposed by Bidders, whether included as a specified requirement or otherwise.</p> <p>If Bidders are NOT required to comply with BS5975: 2019, the Bidding Documents shall state that Bidders are to comply in any event with the requirements of JSSS 1.29.13 and 1.29.14 and submit full details in the Safety Plan.</p>
<p><i>The following all requires further development, addition and coordination by MD:</i></p>	
<p><u>Temporary Perimeter Fencing:</u></p>	<p>Simple fencing to complicated security depends upon Project and location and nature of works.</p> <p>Improvement Projects (e.g. airports, roads and railways) may not need this as existing or maybe new permanent fencing can be used.</p> <p>Gates barriers and other treatment at Site entrances e.g.</p>

	<p>simple gate or barrier through to complicated type including communications, lighting and temporary power</p> <p>Security at entrance and around the site (minimal, extensive or in some cases on existing facilities) already provided by employer.</p> <p>Fencing within the site around hazardous areas or around operating plant areas.</p>
<u>Temporary Accommodation and Facilities</u>	<p>Should list the required facilities in a range such as none for urban Projects, to full accommodation for rural Projects where no suitable accommodation.</p> <p>Health and sanitation requirements</p> <p>Leisure facilities</p> <p><u>Temporary Transportation Requirements</u></p> <p>Nothing for urban Projects, to full provision, e.g, buses and drivers etc for rural Projects where nothing safe is available.</p> <p><u>Canteen Facilities</u></p> <p><u>Sanitation Facilities</u></p> <p>etc etc</p>
Others to add - MD	

To assist with compliance of the above requirements, a checklist has been prepared and is attached to this Part

To be coordinated by MD with the later checklist

C2. Required Detail of Bid Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Safety Plan, page BF-33.

Delete “[Insert Safety Plan]” and in this place insert the following:

Prepare the **Bid Safety Plan** including details of all items listed below:

It is understood that the **Bid Safety Plan** will be developed by the Contractor in more detail in the Commencement Safety Plan issued at commencement stage and at later stages but it is important that the Bid Safety Plan contains comprehensive and clear information so that the Bidders response to the requirements of the following paragraphs is evident and can be evaluated.

Irrespective of what **Bidders may include in their** plans and of any subsequent acceptance, approval or consent to the same, the detailed requirements of JSSS will continue to apply and prevail unless otherwise specifically agreed later in writing by the Engineer.

NK For Bidding purposes, the following is a copy of Annex 1, please coordinate as necessary if changes are made to Annex 1 and make the same changes here

(22) Description of the Works

A description of the Works in outline and with overall layout plan to give an understanding of the overall layout and content of the Works showing main construction items and areas, roads, road access locations, working areas, storage areas, temporary offices, laydown areas, warehouses and the like facilities and including a summary of principal work items and significant quantities, etc.

(23) **Bidder's** Corporate Policy on Health and Safety Management

A description of the **Bidder's** corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the **Bidder's** head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(24) Health and Safety Management System, Responsibility and Authority of **Bidder's** Personnel

A description of the health and safety management organisation at Site headed by the **Bidder's** Health and Safety Officer at Site and showing the responsibility and authority of all other Contractor's Personnel involved in health and safety management at the Site.

(25) Health and Safety Laws

A list of Laws (including all standards) of the Country to be complied with for the health and safety management of the Works, unless superseded by JSSS. If superseded by JSSS then the relevant Clause or Sub-Clause number of JSSS shall be inserted.

(26) **Bidder's** Safety Certification and Implementation Policy

*NK see query in JSSS 1.5 and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under **JSSS Cl.***

The following Sub-Clauses have also been added to JSSS Chapter 1.

Unless otherwise expressly stated in the Bidding Documents, **Bidder's** shall be formally accredited under OHSAS 18001 and shall possess a current and valid certification for Occupational Health & Safety under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation.

An authorised true copy of the current certification shall be provided in this part of the Bid and shall subsequently be included with the Contract.

(27) Temporary Works

NK this requires to be added as it is an essential part of the Safety Plan

Description of the arrangements for controlling risks arising from the use of Temporary Works by ensuring that the requirements of **JSSS 1.29** are fulfilled.

~~(28) Safety Measures for Contractor's Equipment and Temporary Works~~

Requires changing due to the above added Sub-Clause

A description of the procedures for inspecting and maintaining Contractor's **Equipment and Temporary Works** together with all spare parts including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(29) Health and Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and

safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(30) Plans for Health and Safety Education and Training

An outline description of the proposed education and training methods and facilities including participants, time, teaching materials, policies for selecting educators and trainers, etc. and covering safety induction.

(31) Deployment of Health and Safety Related Facilities and Personal Protective Equipment (PPE)

A description of the intended policies for the deployment of facilities and equipment to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general Personal Protective Equipment (PPE) and the use of additional PPE for particular working conditions and environments.

(32) Health and Safety Rules

A description of the general health and safety rules (e.g. limitation of smoking area, traveling speed on site, cleanliness and tidiness, etc.) indicating measures for preventing accidents on the site.

If a specific work area, condition or environment (such as operational areas, hazardous areas, Confined Spaces or the like) requires detailed rules, this shall be stated and detail will be developed in later issues of the Safety Plan.

(33) Site Safety Inspection Plan

A description of the methods for on-Site inspections showing locations and frequency. The description shall also include the methods for reporting, recording and utilising results.

Also attaching warning notices and labelling hazardous equipment, structures and the like?

(34) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any other trespassers upon the Site will be prevented. The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.

(35) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

(36) Prevention of Construction Accidents at Site

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(37) Emergency Response Plan

A description of the Emergency Response Plan including the action plan for rescue of casualties in an emergency such as when a major accident or disaster occurs, work discontinuation, notification to emergency contacts (creation of an emergency contact list and contact range and contact methods according to the type of emergency), contact with related parties, etc.

(38) Accident Relief Plan

A description of the Accident Relief Plan including the procedure for first aid at the location and time of any accident and a description of appropriate medical facilities to be provided at the Site, including for example nurse, doctor, ambulance etc. all as stated in the Bidding Documents. The procedure shall also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(39) Facilities for Maintaining the Occupational Health Environment

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

(40) Work Discontinuation Criteria

DCI - Needs later coordination with other sections:

A description of the proposed criteria for discontinuation by HSO of work for example when danger is predicted for work due to strong wind, heavy rain, snow or other factors

(41) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings, 5S and KYT activities (refer to JSSS 1.13)

(42) Legal Remedies and Requirements after Occupational Accidents

A description in brief of the legal requirements and remedies in the case of injuries and death at work and for personnel affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

C3. Bid Evaluation Requirements for Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section III. Evaluation and Qualification Criteria, 1, Evaluation, 1.1 Evaluation of Technical Bids.

(Applies to both Section III. Evaluation and Qualification Criteria (Following Prequalification) and Section III. Evaluation and Qualification Criteria (Without Prequalification), Pages EQC-1)

In the paragraph stating [Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilise key equipment and personnel for the Contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI, Works Requirements.] insert "and Safety Plan" in the third line after the words, "work methods".

Insert the following additional paragraph after the above paragraph:

"Evaluation of the Safety Plan shall take account of the Health and Safety Officer, and if compliance with BS5795: 2019 is a specified requirement of the Bidding Documents (refer to JSSS C1) of any principal Temporary Works coordination, design and supervision staff, under item in 1.1.2 Personnel and of PPE and any other safety equipment from the Safety Plan in 1.1.3 Equipment."

C4. Health and Safety Officer and (if applicable) Temporary Works staff:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders Section III. Evaluation and Qualification Criteria against 1.1.2 Personnel,

Delete position 2 as stated and insert as follows:

2 Health and Safety Officer at the Site

Delete position 3 and the words “e.g. Health and Safety (Accident Prevention Officer) and insert the following:

(if any of the following are a specified requirement of the Bidding Documents by reference to JSSS C1):

3. Temporary Works Coordinator
4. Temporary Works Designer
5. Temporary Works Supervisor

On the following line insert the words:

Other personnel to be inserted as appropriate.

Under “Notes for Employer” delete notes 1 and 2 and in this place insert the words:

The proposal for all required personnel shall be evaluated.

C5. Bidder’s Safety Declaration (Form BSD):

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms

Include “Form BSD – Bidder’s Safety Declaration” in the Bidding Documents after the existing Form-ACK, with new page BF-56; renumber existing pages BF-56 and BF-57 appropriately and insert suitable reference in the Table of Forms on page BF-1.

The Employer requires all Bidders to appoint the Health and Safety Officer at the Site (HSO) prior to Bid submission and this HSO shall sign Form BSD in addition to the Bidder’s Official Representative.

Please refer to Annex C.2 to this Part C for a copy of Form BSD

PARTICULAR CONDITIONS OF CONTRACT:

C6. Submission and Review of Method Statements and Safety Plans:

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause 4.1 Contractor’s General Obligations</p>	<p>Delete that part of the fifth paragraph of this Sub-Clause which states:</p> <p>The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.”</p> <p>and in this place insert:</p> <p>(a) The Contractor shall, whenever required by the Engineer, submit Method Statements and Safety Plans each with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works or any part of the Works. The Contractor shall submit the requested information within 14 days of the date of the request.</p> <p>(b) The Engineer may review the Method Statements and/or Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Method Statement and /or Safety Plan does not comply with the Contract. Within 14 days after receiving any such notice the Contractor shall rectify</p>
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	<p>any non-compliance and resubmit to the Engineer.</p> <p>If the Engineer gives no such notice of non-compliance for the original Method Statement and/or Safety Plan within 21 days of the date of receipt or for the resubmitted Method Statement and/or Safety Plan within 14 days of receipt, the Contractor shall proceed in accordance with the Method Statement and/or Safety Plan subject to complying with his other obligations under the Contract.</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within 14 days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within 14 days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(d) The Contractor shall submit a revised Method Statement and/or Safety Plan whenever required by the Engineer or when any previous Method Statement and/or Safety Plan for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site in accordance with the requirements described in items (a) to (c) above.</p> <p><i>DCI: NK, the above relates to any part of the Works and are effectively "Particular Safety Plans" which actually will not be required so often (or even at all) IF the Safety Plan at Commencement (see PC 4.8) is prepared properly.</i></p> <p><i>Can we please discuss</i></p>
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C7. JSSS Comprised as Part of the Contract with Further Safety Requirements:

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause 4.8 Contractor's Health and Safety Obligations</p>	<p><i>Delete this Sub-Clause completely and replace with the following:</i></p> <p>The Contractor shall:</p> <ul style="list-style-type: none"> (a) Comply with all applicable health and safety Laws of the Country, all standards and regulations, (b) Comply with all applicable health and safety obligations specified in the Contract including
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	<p>those contained in the JICA Standard Safety Specification (JSSS) and which as an entire document is to be read and construed as an integral part of the Contract by virtue of this Contract Sub-Clause amendment;</p> <p>(c) Comply with all directions issued by the Contractor's Health and Safety Officer (appointed under Sub-Clause 6.7 [<i>Health and Safety</i>] as amended by PC 6.7;</p> <p>(d) Take care of the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed;</p> <p>(e) Keep the Site, the Works (and the other places (if any) where the Works are being executed) clear of unnecessary obstruction so as to avoid danger to these persons;</p> <p>(f) Provide fencing, lighting, safe access, guarding and watching of:</p> <p>(i) the Works, until the Works are taken over under Clause 10 [<i>Employer's Taking Over</i>]; and</p> <p>(ii) any part of the Works where the Contractor is executing outstanding works or remedying any defects during the Defects Notification Period; and</p> <p>(g) Provide any Temporary Works (including roadways, footways, guards and fences) that may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land and property.</p> <p>Within 28 days of the Commencement Date and not less than 28 days before commencing any work at the Site, the Contractor shall submit to the Engineer for information an updated Safety Plan showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>This shall be based upon the Safety Plan issued at bid stage, further developed as necessary to provide the comprehensive detail required by the HSO, so that the document complies with the Contract.</p> <p>This document shall be in addition to any other similar document required under applicable health and safety Laws of the Country.</p> <p>This Safety Plan shall set out or refer to all the health</p>
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	<p>and safety requirements:</p> <p>(a) that are stated in JSSS;</p> <p>(b) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and</p> <p>(c) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Works are being executed.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer, shall be in accordance with PC 4.1 [<i>Contractor's General Obligations</i>].</p> <p>The Safety plan shall be revised as necessary by the Contractor or the HSO or at the reasonable request of the Engineer with each revision submitted promptly to the Engineer for his information.</p> <p>In addition to the safety reporting requirements of sub paragraph (g) of Sub-Clause 4.21 [<i>Progress Reports</i>] the Contractor shall inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than 24 hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.</p> <p>The Contractor shall, comply with the health and safety recording and reporting requirements of JSSS.</p> <p>The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p> <p>Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.</p>
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C8. Change “accident prevention officer” to “Health and Safety Officer”:

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause 6.7 Health and Safety	In the second paragraph, delete the words “accident prevention officer at the Site” and insert “Health and Safety Officer at the Site”
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C9. Revised Order of Priority of Documents

Part 3 - Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part

B - Specific Provisions.

<p>Sub-Clause 1.5 Priority of Documents</p>	<p>Delete sub-items (a) to (i) and insert the following sub-items (a) to (j):</p> <ul style="list-style-type: none"> (a) the Contract Agreement (if any), (b) the Letter of Acceptance, (c) the Letter of Tender, (d) the Particular Conditions - Part A, (e) the Particular Conditions - Part B, (f) these General Conditions, (g) the JICA Standard Safety Specification (JSSS) and the signed Bidder's Declaration, (h) the Specification, (i) the Drawings, and (j) the Schedules and any other documents forming part of the Contract.
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Included to avoid the discrepancy that exists with the Contract Agreement where this is also referred to (see below).

C10. Listing of Documents to be included in the Contract Agreement:

Part 3 - Conditions of Contract and Contract Forms, Section IX. Annex to the Particular Conditions - Contract Forms

<p><i>[Option A: One-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p>In paragraph 2. delete sub-items (i) to (ix) and insert the following sub-items (i) to (x):</p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Bid; (iii) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (iv) the Particular Conditions; (v) the General Conditions; (vi) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (vii) the Specification; (viii) the Drawings; (ix) the completed Schedules; and (x) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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and:

<p><i>[Option B: Two-Envelope Bidding]</i></p>	<p>In paragraph 2. delete sub-items (i) to (x) and insert the following sub-items (i) to (xi):</p>
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Contract Agreement	<ul style="list-style-type: none">(i) the Letter of Acceptance;(ii) the Letter of Technical Bid;(iii) the Letter of Price Bid;(iv) the addenda Nos [<i>insert addenda numbers, if any</i>] (if any);(v) the Particular Conditions;(vi) the General Conditions;(vii) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration;(viii) the Specification;(ix) the Drawings;(x) the completed Schedules; and(xi) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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ANNEXES TO PART C: AMENDMENTS TO “JICA STANDARD BIDDING DOCUMENTS”

Annex C.1: Checklist of Particular Safety Requirement in Technical Specifications

MD to develop this listing basically to create a simple yes/no check that required safety items have been addressed in the preparation of the Bidding Documents.

The list will be prepared after the later specification sections have been received from NK and have been reviewed by MD.

It is suggested that this listing be completed by the Executing Agency and submitted by them as a separate simple listing at the same time as the draft Bidding Documents are submitted for the concurrence of JICA.

Annex C.2: Form BSD – Bidder's Safety Declaration

**Form BSD:
Bidder's Safety Declaration**

I, *[insert name and position of authorised signatory]*, being duly authorized by *[insert name of Bidder/members of joint venture (“JV”)]* (hereinafter referred to as the “Bidder”) to execute this Form-BSD hereby declare our commitment to comply with the requirements of the JICA Standard Safety Specification (JSSS).

I further declare on behalf of the Bidder, that if selected to undertake the Works in connection with the Contract, we will ensure that the Site is established and maintained as a healthy and safe workplace for the Employer's Personnel and the Contractor's Personnel and any other persons entitled to be thereon or that may be affected by operations thereby and that the Bidder is aware and accepts to follow all of the relevant health and safety Laws of the Country and the requirements of JSSS.

Irrespective of any Laws of the Country and the enforcement or otherwise of same, the Bidder hereby declares that he has given full and careful consideration, fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, Personal Protective Equipment, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder further declares that all Works shall be carried out under the control of our qualified and expert health and safety management and where not available in the Country, we will import for sole use upon the Works:

1. New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for purpose and all to meet with the approval of the Engineer in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged;
2. New or recent Contractor's Equipment (not more than 5 years old unless otherwise pre-inspected and approved by the Engineer) all fit for purpose, in full working order, safe, clean, non-polluting, complete with all necessary spare parts and consumables and suitable for use on the Works; and

... that all of the above will be used for the purpose intended.

The Bidder further declares that he shall find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.

The Bidder further declares that he (and any of his Subcontractors) shall:

1. Employ workers with appropriate skill, qualification and capability;
2. Fully inform workers about hazards;
3. Provide health and safety training to all Contractor's Personnel and Employer's Personnel in a language and vocabulary they can understand;
4. Keep accurate records of work-related injuries and illnesses;
5. Perform tests in the workplace, such as air sampling as required by JSSS;
6. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;
7. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned;

8. Provide eyesight, hearing and mobility examinations and other medical tests required by JSSS;
9. Post injury and illness information and data where workers can see them;
10. Inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than 24 hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately; and
11. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if he is successful with his Bid, the Health & Safety Officer at Site, named below and also included in Bidding Forms, Form PER -1: Proposed Personnel, unless otherwise stated in the Bidding Documents, shall be assigned from the Commencement Date, full time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If our Bid is accepted we agree that this Declaration together with all other documents comprised in our Bid Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

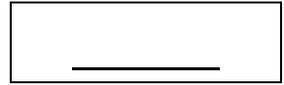
Date: _____

Signed:

(Bidder's Proposed Health and Safety
Officer at Site)

Name:

Date: _____



JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA



***Japan International Cooperation Agency
(JICA)***

_____, 2020

Prepared: DCI for NK
Issue: 5
Revision:
Date: 31/10/2019

ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources and expresses its gratitude to such other sources and publications which include:

1) *Japanese Acts, Orders and Ordinances including:*

Industrial Safety and Health Act

Order for Enforcement of Industrial Safety and Health Act

Ordinance on Industrial Safety and Health

Safety Ordinance for Cranes

Ordinance on Safety and Health of Work under High Pressure

Ordinance on Prevention of Anoxia, etc.

Ordinance on Prevention of Hazards Due to Dust

Explosives Control Act

Order for Enforcement of Explosives Control Act

Ordinance on Explosives Control

2) *“OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A..*

3) *Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.*

4) *Conditions of Contract for Construction For Building And Engineering Works Designed By The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)*

DISCLAIMER

JICA has prepared and issued this document in good faith for the reference of executing agencies, contractors and project teams engaged under the Japanese ODA programme, to encourage the attainment of a higher standard of health and safety management on its construction projects. JICA, together with the Executing Agencies of its ODA Projects shall not accept or assume any liability or responsibility for any events or the consequences thereof deriving from the use of this document. The document is provided without any express or implied warranty, including without limitation, warranties of accuracy, completeness, fitness for purpose, in general or on particular Projects and non-infringement. This document is intended to provide general reference and shall not be relied upon as a specific legal source or reference or used in any way as a basis of any claim by a contractor against any employer or vice versa under any contract for the execution of any Works.

JICA STANDARD SAFETY SPECIFICATION (JSSS)

Indicative Only

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13. Road Works	13.1	<i>(Excluded - to be included in JSSS Second Edition)</i>
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18. Others	18.1	Flash-Floods/Landslides: <i>(excluded - to be included in JSSS Second Edition)</i> <i>Note this is partly added in Chapter 1 see JSSS 1.23 Emergency Response Plan</i>

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

PREAMBLE NOTES

A. Purpose and Objective:

The Japan International Cooperation Agency (hereinafter referred to as “JICA”) require that all parties engaged upon their ODA Projects shall endeavour to establish and maintain a culture ensuring human security and the maintenance of human rights as an essential and fundamental feature. The common objective shall be the achievement of a zero-accident rate, adopting the slogan of “Safety First” by creating a working environment where health and safety are of the highest priority.

To assist with this objective, JICA have prepared and published this Standard Safety Specification (hereinafter referred to as “JSSS”) and which JICA aim to be adopted for future selected Projects by the Executing Agencies for such Projects.

JSSS is one component of the JICA overall strategy to successfully achieve “**Quality Infrastructure**” under its assistance and development programmes. JICA are committed to pursuing the highest achievable levels of quality, safety, environmental protection, harmony and efficiency in performance, “**Ensuring Human Security**” whilst ensuring that “**Appropriate Cost Sharing**” is achieved.

B. Effectiveness

JSSS has been published on-line by JICA and it shall become effective and be incorporated by Project executing agencies in the Bidding Documents (and therefore the Contracts) for particular Projects on the date that the ODA agreement for that Project is executed and where the parties to such ODA Agreement have formally and specifically agreed to adopt JSSS as the technical basis for Health and Safety management on that Project.

It is not intended to include or attach a hard copy of JSSS to Bidding Documents or the Contract for respective Projects but a copy of JSSS shall be available on JICA’s web site shown below:

[http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/_____](http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/)

C. Incorporation of JSSS into Contracts

Where the parties to an ODA Agreement have formally and specifically agreed to adopt JSSS for a new Project, the Bidding Documents shall be amended to state this, in accordance with Annex 1.3 and Bids will be requested on this basis.

The Contract Agreement for the newly awarded Project shall include JSSS as a “further document” within the context of GC 1.1.1 [*The Contract*] and a hard copy of JSSS (current as at the Base Date of the Contract) shall be prepared and included with the documents comprised in the Contract for the Project.

Unless otherwise specifically agreed by JICA and the executing agency, JSSS shall not be applied to any on-going JICA funded Projects as at the date of publication of JSSS.

Where JSSS is already in use on any Project, by further agreement between JICA and the executing agency of any such on-going Project, future issues/revisions of JSSS may be applied after the date that such future issues/revisions are published on line subject to issue by the Engineer of an appropriate Variation under GC 13.1 [*Right to Vary*].

It is requested that the Employer, Engineer and Contractor will each print separate hard copies of the Contract issue of JSSS for their own reference and all of these entities shall fully inform their personnel, Subcontractor’s, sub-consultants and all other parties who are associated with the particular Project of the existence, content and purpose of JSSS and the objectives thereof.

It is the intention of JICA to formally update their separate “Standard Bidding Documents under Japanese ODA Loans” with instructions for the amendment of Bidding Documents to incorporate JSSS, however in the meantime relevant changes shall be made in accordance with Annex 1.3.

JSSS shall thereafter become an integral part of the Bidding Documents for particular Projects and requirements can be implemented immediately after the Executing Agency has made the required modification to the Bidding Documents, and thereafter JSSS shall be read and construed as a part of the Bid and therefore the Contract for that Project.

D. Compliance and General Obligations

JSSS shall not limit the Contractor’s statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

The Contractor shall ensure that all health and safety hazards and risks are properly identified, evaluated and controlled prior to commencement of any work. Only suitably qualified, fit and competent persons shall manage the health and safety activities.

Compliance with the JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract and shall not impose or imply any role or responsibility upon the Employer or the Employer’s Personnel for health and safety or management of the Works all of which is to be performed by the Contractor under the Contract for the Project.

Where the Laws of the Country so state, the Health and Safety Officer (as defined herein) shall be qualified and legally registered as such in accordance with such Laws.

Similarly, JSSS shall not limit the Contractor to the scope contained herein.

These Preamble Notes and all Annexes to this Chapter 1: General Requirements shall be read and construed as integral parts of JSSS and therefore shall be deemed to constitute integral parts of the Contract for the Project.

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

JICA REQUIREMENTS

1.1 Employer's Safety Declaration

By entering into a Contract, the Employer (together with the Engineer acting as his consultant) declares that he shall collaborate in good faith with the Contractor and take all reasonable measures within his authority and under his control to promote the highest achievable health and safety standards in the execution of the Works all in accordance with his contractual and statutory responsibilities and adopting the slogan:

“SAFETY FIRST”

The Contractor shall aim to achieve “Zero-Accident” in the execution of the Works by taking full responsibility for the health and safety management of the Works and adopting JSSS that specifies the minimum safety requirements that the Contractor shall implement.

A Bidder's Safety Declaration shall be submitted with the Bid, declaring the Bidder's commitments and obligations, in accordance with Annex 1.3.

1.2 Definitions, Abbreviations and Standards

1.2.1 For Definitions, abbreviations and standards contained throughout JSSS, refer to Annex 1.1.

1.2.2 The following further requirements relate generally to the use of the definitions contained in the Contract and in Annex 1.1:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (3) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (4) Any reference to academic qualification of Contractor's Personnel within this document and unless otherwise stated, shall mean a currently valid academic qualification demonstrated by a certified true diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an equivalent diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.
- (5) Any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor's Personnel shall also be deemed to include the provision by the Contractor of the same such safety measures for Employer's Personnel and any other persons that are entitled to be on the Site and other places (if any) where the Works are being executed.
- (6) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

1.3 Application to Grant Aid and other Projects

- 1.3.1 JSSS has been drafted to apply to JICA ODA Loan Projects and to the relevant FIDIC harmonised form of Contract for such Projects as referred to JSSS 1.2 [*Definitions, Abbreviations and Standards*] item (6).
- 1.3.2 JSSS shall apply equally to other JICA assisted Projects that have been awarded under different forms of contract including those under Contractor design contracts and contracts under the JICA Grant Aid programme. When so used, suitable modification shall be required to the definitions and text of JSSS and the Bidding Documents for those Projects to ensure compatibility and consistency with the relevant contract requirements for the Project, reflecting the same intentions, standards and procedures for improving health and safety.

1.4 JSSS - Laws and Reference Standards

The Contractor shall comply as a minimum with the Laws of the Country, including all health and safety standards.

- 1.4.2 If the Employer has formally agreed with JICA to adopt JSSS for the Project, then the requirements of JSSS shall apply and prevail where the particular standards of JSSS are considered by the Engineer to be higher than the technical requirements of the Laws of the Country without limiting the Contractor's legal duties and obligations under such Laws.
- 1.4.3 Otherwise where the Laws of the Country (including any health and safety standards) are silent on particular health and safety requirements and where provisions are included in JSSS then JSSS shall apply and prevail.
- 1.4.4 JSSS is an abbreviated document and where specifically stated it requires specific compliance with the specified technical requirements of OSHA. As a general rule, where JSSS contains insufficient or no technical regulations or no detailed technical requirements then the related detailed technical regulations of OSHA as a "catch-all" or at least equivalent shall apply.

"At least equivalent" in this context shall mean the standards of an internationally recognised health and safety organisation or authority of the same or similar detail, content, coverage and international acceptance as OSHA, (such as HSE or similar), as proposed by the Bidder in the Bid Stage Safety Plan.

This shall be evaluated by the Employer and agreed between the Parties prior to execution of the Contract Agreement. If in the opinion of the Employer, the standard proposed by the Bidder is not equivalent to OSHA, HSE or similar, then the Employer will choose to apply OSHA as the "catch-all".

Any subsequent requirements for particular reference standards shall be as proposed by the Contractor and given consent by the Engineer on the same basis.

- 1.4.5 JSSS prescribes minimum requirements and the parties are free to include higher standards when so agreed between Contractor, Employer and Engineer.
- 1.4.6 The Contractor shall be deemed to have studied and familiarised himself with the Laws of the Country and to have ascertained if any part of such Laws is superior to any of the particular requirements of OSHA, in which case such particular Laws shall apply and the Contractor shall inform the Engineer accordingly.
- 1.4.7 The reference standards used in JSSS can be substituted with alternative standards after requesting and obtaining the consent of the Engineer who may give such consent only if in his opinion such alternative standards provide an equivalent or higher standard of health and safety than that required by JSSS.
- 1.4.8 Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

- 1.4.9 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation, the requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.

1.5 Contractor's Safety Certification

- 1.5.1 Unless otherwise expressly stated in the Bidding Documents (refer to Annex 1.3), the Contractor shall be formally accredited for complying with the Occupational Health and Safety requirements of OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally accredited organisation as determined by the Employer (if to be determined at Bid Evaluation stage) or Engineer (during the Project implementation stage). The Contractor shall possess a current and valid certification at all times.
- 1.5.2 If accreditation is required by the Bidding Documents, an original or authorised true copy of the current certification shall be submitted as an attachment to Form ELI -1: Bidder Information Form and ELI-2 Bidder's Party Information Form and this shall subsequently be included with the Contract.
- 1.5.3 The Contractor shall submit original or authorised true copies of subsequent annual renewals to the Engineer when same are due.

1.6 Contractor's Safety Plan

- 1.6.1 The Contractor shall be required to submit the Safety Plan principally at two stages:
- (1) With the Bid submission.
 - (2) Within twenty-eight (28) days of the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site, refer to GC 4.1 [*Contractor's General Obligations*], as amended by Annex 1.3.
- 1.6.2 The Safety Plan is intended to provide an accurate and comprehensive indication of what will be provided or performed by the Contractor to ensure that health and safety management is maintained at a high level throughout the Time for Completion of the Works. The Contractor shall update and revise the Safety Plan at any stage to reflect actual requirements.
- 1.6.3 Submission of any Safety Plan and inclusion in the Bid or Contract or following any submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility and at any time throughout the Time for Completion of the Works.
- 1.6.4 For details of the Safety Plan at Bid stage, refer to Annex 1.2 [*Detail of Safety Plans in Bidding Documents*].
- 1.6.5 For details of the Safety Plan at commencement stage, refer to Annex 1.3, Clause 1.3.7 and GC 4.8. [*Contractor's Health and Safety Obligations*] as amended by Annex 1.3.
- 1.6.6 Further revision of Safety Plans

The Safety Plan (or parts of it) shall be revised or supplemented to suit changing circumstances or conditions at the Site or where considered necessary by the HSO or when required by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*], as amended by Annex 1.3.

The Safety Plan (if necessary supplemented with later particular safety plans) shall ensure that the Engineer, is made aware in writing of at least the following information for all parts of the Works, in any event not less than twenty-one (21) days before commencing any parts of the Works:

- (1) Work outline, work procedure and order of carrying out the work;
- (2) Number of Contractor's Personnel;

- (3) Safety management system and responsibility and authority of Contractor's Personnel;
 - (4) Risk assessments;
 - (5) Safety measures;
 - (6) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE);
 - (7) Safety education and training of the Contractor's Personnel and TBM;
 - (8) Teaching materials used in education, training and pre-operation TBM before work;
 - (9) Method of information sharing and communication among the Contractor's Personnel;
 - (10) Implementation and monitoring of measures for health and safety management;
 - (11) Reference technical safety standards;
 - (12) Temporary Works;
 - (13) Accident Response Plan;
 - (14) Health Care Plan;
 - (15) Fire Fighting Services; and
 - (16) Emergency Response Plan.
- 1.6.7 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.
- 1.6.8 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.
- 1.6.9 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed of all hazards and risks on the Site.
- 1.6.10 The procedural flow of risk assessment shall be as follows.
- (1) Identifying hazards.
 - (2) Evaluating risks.
 - (3) Determining measures of risk reduction.
- 1.6.11 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:
- (1) Removal of hazards such as eliminating dangerous works.
 - (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
 - (3) Engineering measures.
 - (4) Management measures – enhanced training and skills.
 - (5) Use of PPE.

1.7 Engineer's Safety Representative

- 1.7.1 On larger Projects with multiple contract packages and contractors, and if so stated in the Bidding Documents for those Projects, the Engineer may appoint an assistant under GC 3.2 [*Delegation by the Engineer*] to be known as the Engineer's Safety Representative (ESR) and who shall be responsible for health and safety within the Engineer's organisation on Site and for monitoring the Contractor's compliance with each contractor's Safety Plan.

In such case and by written notice served under GC 3.2 [Delegation by the Engineer], the Engineer shall delegate authority to the Engineer's Safety Representative to represent the Engineer in matters of health and safety at Site, to issue written instructions to the Contractor on matters of health and safety and monitor compliance with such instructions which shall include:

- (1) Instructions requiring the Contractor's compliance with the Safety Plan.
- (2) Emergency instructions to Contractor to stop working where the Engineer observes accidents, near misses or unhealthy or unsafe conditions.
- (3) Instructions requiring the Contractor to change the working methods at the Site to improve health and safety.

1.7.2 The Engineer's Safety Representative shall cooperate and work closely with the HSO and will represent the Engineer on Joint Site Safety Inspections and also undertake independent and regular inspections of the Works at the Site.

1.7.3 The Engineer's Safety Representative shall give safety compliance instructions to the Contractor in accordance with his/her delegated authority under GC 3.3 [*Instructions of the Engineer*].

1.7.4 The Contractor shall take corrective action within the time limit prescribed in the instruction, shall keep the Engineer's Safety Representative fully informed on progress and shall report in writing when the corrective action is completed.

1.7.5 If the Bidding Documents state that the appointment of a full-time or part-time Engineer's Safety Representative is not required (refer to Annex 1.3), it is to be assumed that the Engineer's representative at the Site shall act in this capacity.

1.8 Safety Compliance Instructions from the Engineer

1.8.1 Without affecting or diminishing the Contractor's responsibility under GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3, to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.

If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [*Suspension of Work*] until the Contractor has taken corrective and preventive measures to ensure that no further risk exists.

If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated and proposed to the Engineer and implemented at the Site, to ensure that no such accident can reoccur.

1.8.2 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.9 Contractor's Health and Safety Officer at the Site.

1.9.1 Requirements for the HSO:

- (1) The Bidder shall name the HSO in the Bid and thence the same person shall be named in the Contract. The Contractor shall assign the named HSO upon the Site of the Works, on or before the Commencement Date.

- (2) If the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [*Contractor's Personnel*] as amended by Annex 1.3, or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable replacement person to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor and not of a Subcontractor and unless otherwise stated in the Contract, the HSO shall be assigned full time upon the Works and his/her responsibilities, authority and duties shall be in accordance with GC 6.7 [*Health and Safety*] as amended by Annex 1.3.
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate academic qualification for such position if required by the Laws of the Country and also (if so required) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall be fluent in the language for communications stated in the Contract as defined in GC 1.4 [*Law and Language*]. The HSO shall preferably also be fluent in the ruling language of the Contract (if different) however it is acceptable for the HSO to use a translator for this language only.
- (7) Where there is no legal requirement under the Laws of the Country for academic qualification, the HSO, shall have appropriate academic qualification for health and safety, work experience in construction (minimum ten (10) years) and in health and safety management (minimum five (5) years which can be concurrent with construction experience) and two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country) and whom the Contractor considers is qualified to perform the duties subject to receiving the consent of the Engineer.
- (8) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his/her duties.
- (9) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO including additional managers, assistants and inspectors all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.
- (10) The HSO (where necessary with the assistance of his qualified support staff) shall personally be capable to ensure that:
 - (a) All working areas of the Site are inspected on a regular basis (at least once every working day) to detect if any unsafe practices, works or conditions exist; and
 - (b) If such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken.

Any site inspections attended by the HSO, may also include the attendance of the Engineer or his safety representative.

1.10 HSO - Scope of Duties

1.10.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.10.2 The particular scope of duties of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Work:
 - (a) Preparation of Safety Plans, implementation, evaluation, improvement, revision and submission thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan;
 - (d) Temporarily stopping or suspending the Works or any part of the Works following any accident or where the HSO discovers any unsafe conditions, unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan;
 - (e) Temporarily stopping or suspending the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.8;
 - (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
 - (g) Preparing proposal, reporting and consulting with the Engineer including when an accident occurs or any risk or hazardous situation is likely;
 - (h) Appointment of health and safety inspectors and assistants after obtaining the consent of the Engineer; and
 - (i) Consultation on safety management with the Employer's Personnel.
- (2) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents.
- (3) Assistance with selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability.
- (4) Planning and implementation of various training and education implementation plans.
- (5) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases.
- (6) Preparing regular internal and external reports on health and safety activities.
- (7) Hazard prediction activity.

1.11 Procedure for Resuming the Works

If the Engineer has issued an instruction under JSSS 1.8 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped or suspended the Works or any part of the Works in accordance with JSSS 1.10 [*HSO – Scope of Duties*] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and cannot reoccur.
- (2) The Contractor shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.

- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within fourteen (14) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving seven (7) days' notice in writing of the resumption date.
- (5) The Contractor resumes the Works or part of the Works on the resumption date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.12 Contractor's Safety Management Activities

1.12.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.12.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

- (1) Overall Safety Management Activities:
 - (a) Arranging, chairing, attending meetings as described above and other internal contractor meetings including TBM;
 - (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and
 - (c) Monitoring the implementation of the Safety Plan.
- (2) Safety Management of Contractor's Personnel:
 - (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, toolbox meetings, providing general advice and instruction, specific instructions on individual works, safety confirmations, information to be conveyed etc.
 - (b) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as:

5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline.

KIKEN YOCHI TRAINING (KYT) for hazard prediction training usually in TBM, where: K = kiken (hazard), Y = yochi (prediction) and T = training.
 - (c) Instruction and management of safety education and training.
 - (d) Instruction and management of all safety measures.
 - (e) Joint Site Safety Inspections

1.13 Joint Site Safety Inspections

1.13.1 In addition to the Contractor's own daily Site Safety Inspections, the Contractor shall conduct regular Joint Site Safety Inspections with the Engineer or (if appointed) the safety representative of the Engineer. Respective safety staff may also attend.

- 1.13.2 Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.13.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.13.4 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.14 Compliance Monitoring and Auditing

- 1.14.1 The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured and that such compliance is monitored efficiently and transparently at all times, for which purpose the Contractor shall:
- (1) Create checklists for monitoring.
 - (2) Carry out regular and irregular inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions.
 - (4) Create files and safe storage systems for the monitoring records.
 - (5) Copy all relevant information to the Engineer as requested by the Engineer.
- 1.14.2 Safety inspections, are intended to search for risks and hazards, which present a threat to safe working.
- 1.14.3 The Contractor shall also carry out regular health and safety audits, to ascertain of the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:
- (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
 - (2) Are the Safety Plan requirements being met?
 - (3) Is there documented proof of compliance?
 - (4) Is health and safety training effective?
 - (5) Is the Contractor's health and safety management system working effectively?
- 1.14.4 The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the Works.
- 1.14.5 The audit team shall be headed by the Contractor's Representative and at least two other members of the Contractor's Personnel, preferably including an Operation Leader. The HSO may attend but only in an advisory capacity and team members shall not be required or allowed to audit their own work.
- 1.14.6 The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.
- 1.14.7 The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems; they shall not replace the regular health and safety inspections.
- 1.14.8 The audits shall be conducted on a random basis at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.
- 1.14.9 The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor.

- 1.14.10 A single prearranged annual audit is not recommended as it will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.
- 1.14.11 An audit report shall be prepared by the Contractor's Representative detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.
- 1.14.12 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.15 Proper Placement of Contractor's Personnel

- 1.15.1 To varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided. Only appropriate personnel shall be assigned, suitable and capable for the work tasks for which they are selected in terms of academic qualification, skill, experience and also in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct, workwear, tools and equipment, PPE and Safety equipment etc.
- 1.15.2 Construction labourers and manual workers shall never be assigned on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader of an appropriate grade to ensure that safe working practices are constantly applied.
- 1.15.3 The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.
- 1.15.4 The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.
- 1.15.5 The HSO shall countersign all such records to indicate his confirmation of the suitability of each member of the Contractor's Personnel prior to their placement. These records shall be made available for inspection by the Engineer.
- 1.15.6 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:
- (1) Work content and work environment.
 - (2) Work experience, academic qualification and capability.
 - (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
 - (4) Allocation of an achievable and safe work volume and time.
 - (5) Allocation to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].
- 1.15.7 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic qualification, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel comply with such requirements

1.15.8 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic qualification, experience and skills.

1.15.9 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that he resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site unless otherwise approved by the Engineer and assigning a suitable replacement.

1.16 Safety Training Generally

1.16.1 The Contractor shall conduct health and safety education and training for all of the Contractor's Personnel.

1.16.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.

1.16.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid and the Contractor shall bear all necessary Cost and expenses.

1.17 Safety Induction Training

1.17.1 Safety induction training shall be provided by the Contractor for all Contractor's Personnel upon the Site when they commence work on Site and also when they are scheduled to change work type, skill or location. The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting any work.
- (5) Dangerous Works; General rules, locations, precautions and general working requirements. (Refer to separate requirements for special training).
- (6) PPE and other safety devices; use, handling and care.
- (7) Maintaining all areas of the Site in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment.
- (9) Fire Fighting; Actions, precautions and control.
- (10) Health and safety rules.
- (11) Causes and prevention of diseases that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

- 1.17.2 Practical on-Site demonstrations shall be included in every case and wherever possible.
- 1.17.3 The Contractor shall provide safety induction training to the Employer's Personnel and to any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed at the request of the Employer or Engineer.
- 1.17.4 Training Personnel
- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
 - (2) All trainers shall be fluent in the language of the Country.
 - (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic qualification, ability and experience, subject to receiving the advance consent of the Engineer.
- 1.17.5 Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.18 Skill Training

- 1.18.1 The Contractor is reminded of his obligations under GC 6.9 [*Contractor's Personnel*] as amended by Annex 1.3) which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.
- 1.18.2 The Employer requires the Contractor where possible to employ local workers, in particular potential counterpart Operation Leaders for each trade and skill group and operation and in the spirit of cooperation, the Contractor is requested to train and to transfer skills to such persons largely through OJT with the assignment of foreign Contractor's Personnel as required by GC 6.9 as amended by Annex 1.3.
- 1.18.3 In addition, and to compliment this OJT, the Employer requires the Contractor to provide classroom-based training courses and to assign qualified instructors to provide basic skill training to develop the ability of local counterpart Operation Leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots. Examples of the scope of this skill training are included in Annex 1.5xxx. The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for information. For further details refer also to Annex 1.3.
- 1.18.4 It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall automatically be locally employed and trained for the purpose, this remains as the Contractor's choice in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel (including foreign personnel if necessary) who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.

1.18.5 Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [*Contractor's Personnel*] as amended by Annex 1.3.

1.19 Dangerous Work

1.19.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.19.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training pursuant to the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.19.3 A specially trained Operation Leader shall always be assigned to work full-time with every team of workers engaged upon Dangerous Work.

1.19.4 A Spotter shall also be assigned to stand adjacent to any Dangerous Work areas, ensuring that all is in order and where necessary to raise the alarm if there is any suggestion of difficulty, accident or emergency.

1.19.5 The Contractor shall select, train and equip specialist rescue teams at the Site, who can be called upon immediately in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment.

1.20 Accident Response Plan

1.20.1 The Contractor is reminded of his obligations under GC 6.7 [*Health and Safety*] (as amended by Annex 1.3), in collaboration with local health authorities, to provide the following services and facilities and to make them available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel:

- (1) Medical staff.
- (2) First aid facilities.
- (3) Sick bay.
- (4) Ambulance service.

1.20.2 Where the Site of the Works is situated some distance away from urban areas and/or where there is a lack of immediate availability of suitable medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor's Personnel, to compensate for any lack of available services or facilities or lack of any local health authorities.

1.20.3 Such distant locations shall generally be defined as locations where the transfer time by road from the Site to a hospital with a suitably equipped and medically attended accident and emergency department, exceeds thirty (30) minutes, then the Contractor shall be responsible for providing such additional services and facilities at the Site to ensure that appropriate action can be taken within a maximum fifteen (15) minutes period. Additional facilities should for example include:

- (1) Enhanced medical staff with qualified doctor(s).
- (2) Enhanced first aid and treatment facilities and staff.
- (3) Enhanced medical equipment, medical supplies, medicines and drugs.
- (4) Additional treatment and recovery rooms.

- (5) An equipped ambulance based at the Site with qualified driver and attenders on full time twenty-four (24) hour, seven (7) day per week, stand-by duty.
- 1.20.4 Where the transfer time by road can exceed one (1) hour, emergency air-ambulance facility shall also be considered in addition to the above.
- 1.20.5 The Specification for all Projects shall include descriptions of the particular required services and facilities to be provided by the Contractor for this purpose (refer to Annex 1.3).
- 1.20.6 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue services and treatment using experienced and qualified medical staff and fully equipped facilities at the Site.
- 1.20.7 Medical and health services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel including their accompanying family members, all other persons (with accompanying family members) who are entitled to be on the Site and other places (if any) where the Works are being executed and at any accommodation for all such persons.
- 1.20.8 Unless otherwise stated in the Specification, first aid, medical and health services and facilities at the Site shall also be made available for the use of any local community, or third parties or neighbours not connected with the Works but living directly adjacent to and potentially affected by the Works.
- 1.20.9 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:
- (1) Medical staff to be assigned at the Site.
 - (2) Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.
 - (3) Medical Facilities on the Site together with description of equipment and consumables.
 - (4) Temporary water and power supply to maintain use during mains supply failure.
 - (5) Type of communication facilities and measures for emergency response.
 - (6) Deployment of appropriate first aid appliances, aids, instruments and medicines.
 - (7) First aid training, appointment of first aiders and dissemination of information.

It is to be noted that GC 6.7 [*Health and Safety*] as amended by Annex 1.3, lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that are necessary to meet the high standard of health and safety management and provision expected at the Site.

It is also to be noted that Medical staff and facilities to be assigned at the Site, in addition to treatment for accidents are also required to provide welfare and hygiene requirements and assist with the prevention of epidemics. This shall also be adequately described in the Safety Plan.

1.21 Measures at the Time Accidents Occur

- 1.21.1 When an accident occurs, the Contractor shall immediately discontinue the work task and take all efforts to:
- (1) Safely locate and extract casualties.
 - (2) Provide first aid treatment at the Site.
 - (3) Provide other Accident Response measures
 - (4) Implement Secondary accident prevention activities, including:

- (a) Preserving the accident site, make safe and prevent anyone interfering or entering;
- (b) Discontinuing construction work related to or in the vicinity of the accident; and
- (c) Implementing any further measures instructed by the Engineer.

1.21.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident or illness in accordance with GC 4.8 [*Contractor's Health and Safety Obligations*] as amended by Annex 1.3.
- (2) Having investigated and established the cause of any accident or illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures to prevent any reoccurrence and shall be in the format indicated in Annex 1.4.

1.21.3 For resumption of work procedures, refer to JSSS 1.11.

1.22 Fire Fighting Services

1.22.1 The Contractor is reminded of his obligations under GC 17.2.7 [*Care of the Works*].

1.22.2 Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor's Personnel and Employer's Personnel, to compensate for any such lack of available public services or facilities.

1.22.3 Such distant locations shall generally be defined as locations where the road journey time by fire engine from an equipped and attended public fire station to the Site exceeds thirty (30) minutes, then the Contractor shall be responsible for providing such additional services and facilities at the Site to ensure that appropriate action can be taken within a maximum fifteen (15) minute period. Such additional facilities may include:

- (1) An equipped fire engine based at the Site with qualified driver and crew on a full time twenty-four (24) hour, seven (7) day per week, stand-by duty.
- (2) Sufficient temporary water and power supply to maintain emergency use.
- (3) Enhanced fire protection equipment and facilities around the Site.

1.22.4 The Contractor shall ensure that persons are kept safely away from any fire and where practicable and safe, to limit the spread of fire.

1.22.5 The Contractor shall select, train and equip specialist emergency fire-fighting teams at the Site, who shall be called upon immediately in the event of any fire, to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated by fire and to provide suitable, specialist and appropriate first aid and medical treatment.

1.22.6 The Specification for all Projects shall include descriptions of the particular required services and facilities to be provided by the Contractor for this purpose (refer to Annex 1.3).

1.22.7 For further information on this topic refer to Section 2.8 [*Fire Prevention*].

1.23 Emergency Response Plan

1.23.1 The Contractor shall take measures to keep all areas of the Site, all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, free from surface water and ground water at all times and by whatever means are necessary to ensure:

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent Landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.23.2 Without prejudice to GC 19 [*Force Majeure*], the Contractor shall take measures to prevent injury, damage and flooding from excessive rainfall and high winds consequent to hurricanes, typhoons, cyclones and tropical depressions directly affecting the Site(s) of the Works, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have reasonably avoided or overcome or lessened the effects.

Similarly, and where there is a risk of seismic or volcanic activity at the Site, the Contractor shall take measures to prevent Landslides and consequent injury, damage and flooding from such earthquakes and volcanic activity.

Such measures to be implemented (where applicable to the extent that advance notice and warnings permit) shall include:

- (1) Designing (or avoiding the use of) permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially cause Landslides with consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed and to any third parties and neighbours and property not connected with the Works but potentially affected thereby.
- (2) Provision of temporary support to all sides and soffits of excavations or tunnelling of sufficient strength, durability and suitability.
- (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.23.3 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3.

1.23.4 Unless otherwise stated in the Specification for the Project, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

This "plan" shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any (remaining) facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. This "plan" does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions given under the Contract.

1.23.5 The Emergency Response Plan, shall cover:

- (1) Evacuation plan.
- (2) Emergency contact system.
- (3) Procedures for assembly and locating assembly points and the like.
- (4) Use of existing and available medical and other related facilities.
- (5) Assisting with search and recovery.

The Emergency Response Plan shall be submitted as part of the Safety Plan and be updated as necessary throughout the Time for Completion of the Works.

1.23.6 The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.23.7 If required by the Specification, (refer to Annex 1.3), the Contractor shall set up an emergency search team (or teams) and train and equip same so that they are able to search, locate, extract and transfer any potential casualties to medical treatment facilities at the Site (if available) or otherwise assist as far as possible with removal to other available medical treatment facilities.

1.23.8 If required by the Specification, (refer to Annex 1.3), the Contractor shall conduct emergency response training based on the Emergency Response Plan at least six (6) months and including:

- (1) Training of the search and recovery team.
- (2) Training of the Site medical team to deal with likely trauma.
- (3) Training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.23.9 If and when an emergency occurs during the Time for Completion, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.23.10 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit and as instructed by the Engineer.

1.24 Contractor's Safety Committee and Regular Safety Meetings

1.24.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.24.2 Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of Contractor's Personnel including workers on Site.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.24.3 The HSO shall be the chairman of the Safety Committee.

1.24.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence;
 - (d) Hazards, safety and health problems resulting from:
 - (i) Site inspections by HSO;
 - (ii) Issues raised by the representative of Contractor's Personnel;
 - (iii) Issues raised by Subcontractors; and
 - (iv) Issues raised by others.
 - (e) Feedback on the regular safety, coordination and other meetings with the Engineer;
 - (f) Safety instructions received from the Engineer;
 - (g) Items to be coordinated with police, fire department and other related organisations;
 - (h) Compliance and registration requirements under the Laws of the Country;

- (i) Safety and health awards, media attention and the like; and
- (j) Other matters.

1.24.5 Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.25 Engineer's Regular Safety Meetings

1.25.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to make commitments on health and safety matters on behalf of the organisations that they represent:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence;
 - (d) Hazards, safety and health problems resulting from:
 - (i) Inspections by the Engineer and the Employer.
 - (ii) Site inspections by HSO.
 - (iii) Issues raised by the representative of the Contractor's Personnel.
 - (iv) Issues raised by Subcontractors.
 - (v) Issues raised by others.
 - (e) Status of resolution of previous problems;
 - (f) Items to be coordinated with police, fire department and other related organisations;
 - (g) Compliance and registration requirements under the Laws of the Country;
 - (h) Safety and health awards, media attention and the like; and
 - (i) Other matters.

1.25.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer with a further copy provided directly to the local office of JICA within the Country.

1.26 Project Safety Committee

- 1.26.1 On larger Projects with multiple contract packages and contractors and if so stated in the Bidding Documents for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.
- 1.26.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:
- (1) The Employer.
 - (2) The Engineer(s).
 - (3) The Contractor's Representative(s).
 - (4) Health and Safety Officers of all members.
- 1.26.3 The Chairman of the Safety Committee shall be the Employer.
- 1.26.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.
- 1.26.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

1.27 Health and Safety Coordination with Other Contractors

- 1.27.1 Refer to GC 2.3 [*Employer's Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer, and
- (3) the personnel of any legally constituted public authorities,

who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to (1) and (2) above, the Employer shall ensure that such personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] as amended by Annex 1.3 and GC 4.18 [*Protection of the Environment*].

In relation to (3) above the Contractor shall ensure that such personnel are fully informed of the Contractor's Safety Plan and shall liaise and agree with such authorities to ensure that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Contractor is therefore required to contact such other contractors directly and liaise with them to obtain all such other information and incorporate this into the Safety Plan.

When risks arise because of potential interactions between the Contractor and other contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Contractor shall take a positive role in ensuring the general principles of risk prevention and control are applied amongst all contractors involved.

- 1.27.2 The Bidding Documents shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.27.3 If the above circumstances apply, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;
 - (c) Accidents, injuries and measures to prevent any reoccurrence;
 - (d) Status of resolution of previous problems;
 - (e) Items to be coordinated with police, fire department and other related organisations;
 - (f) Compliance and registration requirements under the Laws of the Country;
 - (g) Safety and health awards, media attention and the like; and
 - (h) Other matters.

1.27.4 Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the Engineer's monthly progress report.

1.28 Safety Statistics

1.28.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.28.2 Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, casualties, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes of them.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff, contents, frequency, participant, duration of safety education at site and safety event.
- (9) Others.

1.28.3 All data shall be in a format and content format and content to be approved by the Engineer.

1.28.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.28.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.29 [*Safety Reports*].

1.29 Safety Reports

1.29.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, improvement.
- (2) Joint Site Safety Inspections.
- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [*Progress Reports*].

1.30 Health and Safety Records

1.30.1 The Contractor shall keep health and safety records for the following:

- (1) Accidents, fatalities, near-misses.
- (2) Meetings for safety and health management.
- (3) Monitoring of safety and health management activities.
- (4) Health and safety education and training for the Contractor's Personnel.
- (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
- (6) Work environment records and other records required by JSSS Chapter 2 and other parts of JSSS.

1.30.2 All records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer.

1.30.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.29 [*Safety Reports*].

1.31 Health and Safety Incentive Schemes

1.31.1 The Contractor shall consistently enforce legitimate work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.

1.31.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.

1.31.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.

- 1.31.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.
- 1.31.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.
- 1.31.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.
- 1.31.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.
- 1.31.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.29 [*Safety Reports*].

1.32 Safety Equipment, Contractor's Equipment and Temporary Works

- 1.32.1 Contractor's Equipment and Temporary Works to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, PPE, etc.) together with all components, systems, materials and equipment shall be fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

- 1.32.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are regularly inspected by him to ensure compliance with the foregoing by qualified Contractor's Personnel or where necessary, by authorised representatives of the manufacturer. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as "safe for use".

If the HSO ascertains at any time that any items are not so certified he shall immediately stop all use of that item, stop all work for which that item and any associated items is being used and suspend all such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

- 1.32.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor.

If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.32.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to Annex 1.3), the Contractor shall import for sole use upon the Works (where not available in the Country):

- (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
- (2) New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old unless otherwise pre-inspected at origin by the Engineer at the Contractor's expense and pre-approved), all fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.

1.33 Health Matters

1.33.1 Further to the requirements of JSSS 1.20 [*Accident Response Plan*], the Contractor is reminded of his obligations under GC 6.7 [*Health and Safety*] (as amended by Annex 1.3), in collaboration with local health authorities to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.33.2 Where the Site of the Works is situated some distance away from urban areas and/or where there is a lack of immediate availability of suitable medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, the Contractor shall be responsible for providing additional health care services and facilities at the Site as are necessary to fully protect all Contractor's Personnel, to compensate for any lack of available services or facilities or lack of any local health authorities.

1.33.3 Additional facilities should for example include:

- (1) Enhanced medical staff with qualified health care staff.
- (2) Enhanced healthcare treatment facilities, equipment, medical supplies (including anti-mosquito nets in malarial prone areas), medicines and drugs.
- (3) Additional treatment and recovery rooms.

1.33.4 The Specification for all Projects shall include descriptions of the particular required services and facilities to be provided by the Contractor for this purpose (refer to Annex 1.3).

1.33.5 Occupational health care shall be provided by the Contractor and shall include for example:

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [*Working Environment*]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) Frequent or excessive manual handling of loads, stress and fatigue.
- (4) Suitability to work checks including eyesight, hearing and physical mobility and capability.

1.33.6 The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:

- (1) Health care staff to be assigned at the Site.

- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational Healthcare proposal.
- (6) Temporary water and power supply to maintain use during mains supply failure.
- (7) Type of communication facilities and measures for emergency response.

It is to be noted that GC 6.7 [*Health and Safety*] (as amended by Annex 1.3), lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that are necessary to meet the high standard of health and safety management expected at the Site.

- 1.33.7 Medical and health services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel including their accompanying family members, all other persons (with accompanying family members) who are entitled to be on the Site and other places (if any) where the Works are being executed and at any accommodation for all such persons.
- 1.33.8 Unless otherwise stated in the Specification, first aid, medical and health services and facilities at the Site shall also be made available for the use of any third parties and neighbours not connected with the Works but living directly adjacent to and potentially affected by the Works.

1.34 Temporary Works

- 1.34.1 Unless otherwise stated in the Bidding Documents, Bidders are required to comply with BS5975: 2019 Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.
- 1.34.2 The requirement for specifying compliance with BS5975: 2019 in the Bidding Documents by a Project Executing Agency shall be determined by the extent and nature of the Works, Temporary Works and in particular the extent and nature of Falsework and Formwork design. JICA recognise that the requirement may be greater on larger or more complex Works particularly those with a high content of Formwork and Falsework containing proprietary equipment and/or traditional structural and scaffolding solutions all of which may be:
- (1) Designed to support excessively heavy loads.
 - (2) Of excessive height or unusual shape.
 - (3) Of difficult access.
 - (4) With unusual structural or aesthetic solution.
- 1.34.3 Other alternative internationally accepted standards are also acceptable if approved by the Engineer but only if such standards contain equivalent requirements for the management of Temporary Works in addition to the design of Falsework (including Class A Falsework).
- 1.34.4 It is to be noted that BS5975: 2019 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975:2019 and shall submit such justification to the Engineer for his information and consent.

- 1.34.5 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.
- 1.34.6 Where the Bidding Documents state that BS BS5975: 2019 is to apply, the Contractor shall appoint at least the following principal specialist staff who will be dedicated to the Temporary Works:
- (1) Temporary Works Coordinator (TWC): responsible for ensuring the preparation and implementation of effective procedures and who shall retain overall responsibility for all Temporary Works on the Site including the Temporary Works of Subcontractors. The Contractor shall not use the TWC or other personnel of Subcontractors to act as his TWC.
 - (2) Temporary Works Designer (TWD): responsible for preparing the design of all Temporary Works (including any Falsework).
 - (3) Temporary Works Supervisors (TWS): responsible for the erection, safe use, maintenance, dismantling and removal of all Temporary Works in accordance with the design and the requirements of the TWC and TWD and for providing the HSO with the following information to permit further actions:
 - (a) Confirmation that the Temporary Works have been erected in accordance with the design and that such Temporary Works are ready to accept loading; and
 - (b) Confirmation that the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works.
- 1.34.7 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed and completed in accordance with BS5975: 2019 and the Contract. All such records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer.
- 1.34.8 The TWC, TWD and TWS shall be appropriately qualified and experienced and the TWC and TWD shall be named in the Bid and hence the Contract. The TWD can be either Contractor's Personnel or personnel from an appropriately qualified and experienced specialist Subcontractor to be named in the Bid or to be subsequently consented to by the Engineer.
- 1.34.9 Procedures for the appointment and any replacement of the TWC, TWD or TWS shall be the same as described for the HSO in JSSS 1.9 [*Appointment of HSO*].
- 1.34.10 The Executing Agency (via their consultant) during the design stage shall consciously endeavour to remove or reduce risks in the construction of the Permanent Works as far as possible through finding solutions with less construction difficulty and risk.
- 1.34.11 Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and where possible shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit method statements for parts of the Temporary Works (including designs and calculations of Falsework) as may be requested by the Engineer for his review. If the Engineer choose to review same, this shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer has no obligation under the Contract to review Temporary Works design however he may choose to do so for those parts which he may consider to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975:

2019. The Engineer shall have no obligation to issue any response or comment, however if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [*Engineer's Duties and Authority*] Sub-Subclause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.

1.34.12 Where the Bidding Documents do not specifically require the Contractor to comply with BS5975: 2019, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:

- (1) Appointment of appropriately qualified and experienced staff.
- (2) Preparation of an adequate Temporary Works design.
- (3) Independent internal or external checking of the Temporary Works Design.
- (4) Preparation of a Temporary Works register and records
- (5) Pre-erection inspection of all Temporary Works, including materials, components and equipment.
- (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the temporary works, including procedures to:
 - (a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO of a formal "permit to load"; and
 - (b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO of a formal "permit to dismantle" where necessary.

The Safety Plan shall include measures to ensure that the design, erection, maintenance, dismantling and removal are all carried out by competent and experienced individuals and in a controlled and closely supervised manner.

1.34.13 Whether there is or is not any legal requirement under the Laws of the Country for academic qualification, all of the Contractor's Temporary Works specialist staff and any specialist Temporary Works Subcontractors shall have appropriate academic qualification for Temporary Works coordination, design or supervision as appropriate, work experience in construction and in Temporary Works design and whom the Contractor ascertains are qualified to perform the duties.

1.35 User Training

1.35.1 Prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.

1.35.2 The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.

1.35.3 User Training shall vary according to the scope of the Works however it shall generally cover the following:

- (1) Safe system and Plant use, operation and process control.
- (2) System and Plant maintenance and repair.
- (3) Training in use of all hardware and software packages.
- (4) Laboratory control (sampling and analysis) including operation laboratory equipment.

- (5) Recording and reporting.
 - (6) Emergency operation procedure.
 - (7) Maintenance management procedures.
 - (8) Inventory and store control systems.
 - (9) Particular safety procedures, including:
 - (a) Safe working procedure;
 - (b) Housekeeping of the facilities;
 - (c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and
 - (d) Safety measures for the Works and all items of Plant.
- 1.35.4 Any changes to the above with further particular details of User Training shall be provided in the Technical Specification (refer to Annex 1.3).
- 1.35.5 The Contractor shall also be responsible for training some candidates (as selected by the Employer) to be future trainers, so that when qualified by the Contractor, such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.
- 1.35.6 The Contractor shall not be responsible for paying expenses or salaries of candidates attending training.
- 1.35.7 User Training shall be on Site in the completed facilities, unless otherwise provided in the Technical Specification (refer to Annex 1.3).
- 1.35.8 The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose.
- 1.35.9 The Engineer may choose to send representatives to witness the training.
- 1.35.10 The number of Employer's staff to be trained shall be provided in the Technical Specification (refer to Annex 1.3).
- 1.35.11 All training shall be conducted in the language for communication or in English with translators provided by the Contractor.
- 1.35.12 The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and approval of the Engineer at least fifty-six (56) days before any training commences.
- 1.35.13 The training manuals and all technical literature shall be prepared in both the language for communications and also the English language.
- 1.35.14 The Contractor shall use visual media as much as possible throughout the training process.
- 1.35.15 Training shall cover both theoretical and practical operation and maintenance procedures on the Works, Plant and systems actually constructed and/or installed.
- 1.35.16 The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom are experienced in each specific aspect of the Plant and systems.

- 1.35.17 Factory User Training shall not be required unless otherwise provided in the Technical Specification (refer to Annex 1.3).
- 1.35.18 The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic and practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.
- 1.35.19 The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.
- 1.35.20 Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems.
- 1.35.21 The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Technical Specification (refer to Annex 1.3). Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise provided in the Technical Specification (refer to Annex 1.3), overall training duration shall not be less than fifty-six (56) days.
- 1.35.22 Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week-days.
- 1.35.23 Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.
- 1.35.24 The Contractor shall issue formal certificates, officially indicating that candidates are formally qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or to train future candidates as applicable.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of Chapter 1 shall have the definitions stated:

- (1) “**Executing Agency**” means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and defined in the Contract as the Employer.
- (2) “**GC**” and “**PC**” followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) “**Health and Safety Officer**” or “**HSO**” means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6.7 [*Health and Safety*] as amended by Annex 1.3 and named by the Bidder in his Bid..
- (4) “**JSSS**” or “**JICA Standard Safety Specification**” means the document of this title published officially by JICA on their website, issue number __ dated ____ and as may be modified by the Bidding Documents for the Project.
- (5) “**Method Statement**” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] as amended by Annex 1.3.
- (6) “**Operation Leader**” (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations.
- (7) “**OSHA**” means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

Unless otherwise evident from the text, reference in OSHA to “team leader”, “on-site supervisor”, “on-site supervision”, “field superintendent”, “work chief” and the like shall be collectively construed as reference to “the Contractor’s Representative” and reference to the “safety and health manager of the Contractor” and the like shall be collectively construed as reference to the Contractor’s “Health and Safety Officer”. “The construction plan and safety and health plan”, shall be construed as the “Safety Plan”.

If any ambiguity or discrepancy is found in the OSHA documents specified in JSSS, or if any difference or discrepancy is found between OSHA documents and JSSS, the Engineer shall issue any necessary clarification or instruction.

- (8) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the agreement with JICA and utilising the funds provided by JICA under the terms mutually agreed for that purpose.

- (9) “**Safety Plan**” means a document that contains the overall risk assessments and shows the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] as amended by Annex 1.3.

“**Safety**” shall also mean “occupational health and safety” and “health and safety” all described as such in JSSS and other documents contained in the Contract.

A1.1.2. The following technical words and terms in JSSS shall have the definitions stated:

- (1) “**Accident Response**” shall mean the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.20 [*Accident Response Plan*].
- (2) “**Confined Spaces**” shall mean spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Dangerous Goods**” shall mean corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (4) “**Dangerous Work**” shall mean Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE.
- (5) “**Emergency Response**” shall mean the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.23 [*Emergency Response Plan*].
- (6) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (7) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (8) “**Hazardous Substances**” shall mean any substance, whether solid, liquid or gas, that may cause harm to health.
- (9) “**Hazardous Areas**” shall mean areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as Zone 0, Zone 1 or Zone 2, where:
- (a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;

- (b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation;
 - (c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.
- (10) “**Landslide**” means the movement of a mass of earth, rock or debris down a slope under the direct influence of gravity.
- (11) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Employer is continuing the operation and where the Contractor is required to perform Works.
- (12) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level. PPE for PFAS shall comprise of a body harness, an anchorage, connectors and typically shall include a lanyard, deceleration device, lifeline, or suitable combination of these. The use of a Safety Belt for fall arrest systems is prohibited. Wherever PFAS is provided for use, the Contractor shall ensure that it is used.
- (13) “**Personal Fall Restraint System**” or “**PFRS**” means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall. PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices. Wherever PFRS is provided for use, the Contractor shall ensure that it is used.
- (14) “**Safety Belt**” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard, lifeline or deceleration device. Any safety belt that has actually been subjected to a fall or previous in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for the safety of any worker.
- (15) “**Skill Training**” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.18 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (16) “**Spotter**” or “**Flagman**” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, and for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*] A reference to either member in JSSS shall be deemed to include a reference to the other or both.
- (17) “**User Training**” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment

PW	Permanent Works
TBM	Tool Box Meetings
TW	Temporary Works

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ANSI	American National Standards Institute.
ASTM	American Society for Testing and Materials.
BS	British Standard.
BS EN	British Standard European Norm.
HSE	UK Health and Safety Executive
ISO	International Organisation for Standardisation.
ILO	International Labor Organization
JIS	Japanese Industrial Standards.
ODA	Overseas Development Assistance
OJT	On Job Training

Annex 1.2: Content of Safety Plan at Bid Stage

A1.2.1. At Bid Stage the Safety Plan shall be provided with brief indicative content as an outline Safety Plan. This must however, cover each of the subjects listed in this Annex, demonstrate that the Bidder understands the requirements and it shall contain clear and sufficient detail to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If any parts are superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Reference "Catch-all" Technical Standards

Refer to JSSS 1.4 [*Laws and Reference Standards*]JSSS - Laws and Reference Standards

Confirm in the Bid Stage Safety Plan whether the standards of OSHA are to apply as the "catch-all" and if not, then the Bidder shall state the name of an equivalent internationally recognised standard for health and safety of the same or similar detail, content, coverage and international acceptance as OSHA, (such as HSE or similar), in the Bid Stage Safety Plan.

(6) Bidder's Safety Certification and Implementation Policy

Refer to JSSS 1.5 [*Contractor's Safety Certification*]

Confirm which scheme the Bidder is accredited under.

Attach a valid original (or an authorised true copy) of the current certification under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation, with Form ELI -1: Bidder Information Form and ELI-2 Bidder's Party Information Form.

(7) Temporary Works (TW)

Refer to JSSS 1.34 [*Temporary Works*]

A Safety Plan for TW listing the principal items, describing the content, and specifying the safety measures to be applied to ensure compliance with the requirements.

Include a description of the scope of work for the principal specialist persons to be employed in the management and design of TW and the arrangements for controlling risks arising from the design, erection, maintenance, dismantling and removal of TW.

(8) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3, the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works ensuring that the requirements of GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3, Sub-Subclauses (a) to (d) and any other requirements of the Contract are fulfilled.

(9) Safety Plan for the Permanent Works (PW)

A description of the general health and safety rules for the PW (e.g. limitation of smoking area, traveling speed on site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.) indicating measures for preventing accidents on the Site.

Particular Safety Plans for the various parts of the Works.

(10) Safety Plan for Dangerous Work.

Refer to JSSS 1.19 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS 1.2.2 [*Definitions*]

(11) Safety Measures for Contractor's Equipment

Refer to JSSS 1.32 [*Safety Equipment, Contractor's Equipment and Temporary Works*]

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(12) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.31 [*Health and Safety Incentive Schemes*]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety and to reward for improvement.

(13) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(14) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to JSSS 1.32 [*Safety Equipment, Contractor's Equipment and Temporary Works*]

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(15) Site Inspection Plan

A description of the methods for on-Site inspections by the HSO and frequency. The description shall also include the methods for reporting, recording and utilising results.

(16) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.

(17) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

(18) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(19) Accident Response Plan

Refer to JSSS 1.20 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.

(20) Health Care Plan

Refer to JSSS 1.33 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(21) Fire Fighting Services

Refer to JSSS 1.22 [*Fire Fighting Services*]

Details of the fire fighting services to be provided at the Site.

(22) Emergency Response Plan

Refer to JSSS 1.23 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(23) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings, 5S and KYT activities (refer to JSSS 1.12 [*Contractor's Safety Management Activities*])

(24) Safety Induction Training

Refer to JSSS 1.17 [*Safety Induction Training*])

An outline description of the proposed health and safety training plans, describing methods, facilities, participants, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(25) Skill Training

Refer to JSSS 1.18 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers.

(26) User Training

Refer to JSSS 1.35 [*User Training*]

An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.

(27) Legal requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

Annex 1.3: Required Amendments to “JICA Standard Bidding Documents”

[This Annex applies to Executing Agencies (Employers and their consultants) for use in their preparation of PQ and Bidding Documents, evaluation of Bids and award of Contracts]

JICA advise that the amendments described below shall be made to the “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA), October 2012, version 1.1. (hereinafter referred to as “JSBD”).

JICA intend to re-issue the JSBD incorporating these amendments in detail at some date in the future however, in order that JSSS can be used without delay on particular Projects, for which such use of JSSS has become effective and where the parties have formally and specifically agreed to adopt JSSS for the Project, (as described in JSSS Chapter 1: Preamble Notes, Clauses B and C), the Bidding Documents for such particular Projects shall be drafted to take account of the following amendments in advance of the re-publication of the re-issued JSBD, in accordance with the following instructions.

Amendments to JSBD Part 1: Bidding Procedures

A1.3.1 Bidders Safety Accreditation:

If a Bidder is required to be accredited in accordance with JSSS 1.5 [*Contractor’s Safety Certification*], make the following changes:

- 1) Part 1 – Bidding Procedures, Section I: Instructions to Bidders:

Change the numbering of existing clause from 4.6 to 4.7 and add the following new clause numbered 4.6:

A Bidder and all members constituting the Bidder, shall have the required certifications and/or accreditations (if any) specified in the BDS.

- 2) Part 1 – Bidding Procedures, Section II: Bid Data Sheet:

Add a new item referenced to ITB 4.6, stating as follows:

Required Accreditations: OHSAS 18001, ISO 45001: 2018 or equivalent from an internationally recognised and approved organisation.

- 3) Part 1 – Bidding Procedures, Section III: Evaluation and Qualification Criteria:

Modify 2.1 Eligibility to include a new item numbered 2.1.4 with the following data:

<i>Factor:</i>	Accreditation
<i>Requirement:</i>	Safety Accreditation required by ITB 4.6 and JSSS/BDS
<i>Compliance Requirement:</i>	Single Entity and JV must meet the requirements.
<i>Documentation: Forms</i>	ELI – 1 and 2, with attachments

- 4) Form ELI -1: Bidder Information Form and ELI-2 Bidder's Party Information Form:

Include an additional required attachment at the end of the bottom box of this form as follows:

4. Attached is an original or certified true-copy of

Safety Accreditation required by ITB 4.6 and JSSS/BDS

A1.3.2 Particular Safety Specification Requirements:

Part 1 – Bidding Procedures, Section I: Instructions to Bidders, Section VI. Works Requirements, Specification, pages WR-3 to WR-5.

Add the following additional text on page WR-5 to follow on from the existing text.

JICA Standard Safety Specification

JICA Standard Safety Specification (hereinafter referred to as JSSS) contains detailed requirements for health and safety including procedural requirements for the preparation, submission, review and response processes for Method Statements and Safety Plans for the execution of the Works.

Care shall be therefore be taken when drafting Bidding Documents for Projects where JSSS is to be used to ensure that there is no duplication of the JSSS requirements in the Technical Specification¹ for such Projects. Unnecessary and duplicated reference **must** be avoided.

JICA stress the importance of the Employer creating a sound working environment for the Contractor and therefore Bidding Documents should include for example: reasonable Time(s) for Completion; reasonable, continuous and unobstructed access to the Site and sufficient Site area(s), working and storage areas, all wherever possible. Requirements shall be clearly described in the Bidding Documents.

It must also be recognised that JSSS constitutes a range of standard safety requirements that shall apply generally on JICA ODA Projects and consequently it will be necessary to specify particular safety requirements for each specific Project. Such particular safety requirements shall be carefully and precisely drafted and included in the relevant parts of the Bidding Documents as noted below for such Projects and covering for example the following²:

JSSS Reference	Particular Requirements to be stated
1.7 Engineer’s Safety Representative	<p><i>(On large Projects with multiple contract packages and contractors)</i> The Bidding Documents shall state if the Engineer will appoint a full-time or part-time Safety Representative as an assistant upon the Works or state if the Engineer will act in this capacity.</p> <p>If no such requirements are stated in the Bidding Documents, it is to be assumed that the Engineer’s representative at the Site shall act in this capacity.</p>
1.9 Contractor’s Health and Safety Officer at the Site	<p><i>(On small Projects)</i> The Bidding Documents shall state if the HSO is NOT required to be assigned full-time on the Works.</p> <p>If not so stated in the Bidding Documents, the Contractor must assign a full-time dedicated HSO and if applicable other support personnel as required by JSSS.</p> <p>JICA advise that full-time assignment is the normal requirement and part-time or shared assignment is only allowable on very small projects with separate written justification to be provided by the Executing Agency to JICA.</p> <p>In addition to stating as above, if there is a requirement for the HSO, in Section IV. Bidding Forms, Bill of Quantities, Bill No.</p>

¹ To avoid any potential confusion with the “JICA Standard Safety Specification”, reference is made above to “Technical Specification” as this is the description used in JSBD although not in the FIDIC Conditions of Contract where this is defined as “Specification”.

² See also later checklist Form JSSS/CPR

JSSS Reference	Particular Requirements to be stated
	<p>1: General Items, change item 106 description to “Provide HSO and staff” with unit rate for provision being shown as “month”.</p> <p>Quantity in months shall be of the required period for provision which will usually be the Time for Completion and any required time during the Defects Notification Period.</p>
1.18 Skill Training	<p>The Bidding Documents shall state whether classroom-based skill training of counterpart Operation Leaders is, or is not required. The Contractor shall be expected in any event to provide OJT via his senior personnel to local counterparts.</p> <p>If it is required, the Bidding Documents shall state how many candidates shall be selected, for which skill groups and for how long.</p> <p>This shall be determined by the scope and nature of the Works but JICA suggest a usual maximum teaching period of three months for each candidate with say ten (10) candidates selected for four (4) skill groups, i.e. forty (40) candidates in total.</p> <p>Classroom lessons will be part-time, at least one (1) weekday and two (2) weekday evenings per week. Candidates shall be paid their full wages and allowances during teaching time.</p> <p>The Contractor shall design syllabi to compliment the candidates’ skill group, their work and position at the Site. In addition to skill training, syllabi shall include health and safety training to an international level of appreciation with a general introduction to OSHA and other international safety standards and regulations. The Contractor shall test candidates upon completion of their course, prepare and issue certificates of attendance and successful completion of each course.</p> <p>The Contractor shall provide classrooms which can also be a part of their office facilities at the Site and provide the use of Training Facilities (herein defined as including furniture, equipment, computers, sample tools and working equipment, other teaching aids and the like). Unless otherwise stated in the Bidding Documents, teachers shall be qualified and experienced foreign Operation Leaders assigned by the Contractor to the Works.</p> <p>In addition to stating as above and if there is a requirement for such classroom-based skill training, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items for:</p> <p>Assignment of Operation Leaders as teachers: Unit: man-month Quantity: Total estimated man-months</p> <p>Use of Training Facilities: Sum</p> <p>If any Training Facilities are to be handed to the Employer or issued to candidates, then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such Training Facilities shall remain the property of the Contractor and shall be removed on completion.</p>

JSSS Reference	Particular Requirements to be stated
1.20 Accident Response Plan	<p>The Bidding Documents shall include a listing and description of the additional services and facilities that Bidders are required to provide at the Site in addition to those already required by GC 6.7 [Health and Safety] as amended by Annex 1.3, due to the distance from urban areas, lack of immediate availability of suitable medical facilities, where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works.</p> <p>Examples of additional facilities include:</p> <ol style="list-style-type: none"> (1) Enhanced medical staff with qualified doctor(s). (2) Enhanced first aid and treatment facilities and staff. (3) Enhanced medical equipment, medical supplies, medicines and drugs. (4) Additional treatment and recovery rooms. (5) An equipped ambulance based at the Site with qualified driver and attenders on full time twenty-four (24) hour, seven (7) day per week, stand-by duty. (6) Emergency air-ambulance services. <p>In addition to stating as above, if there is a requirement for such additional facilities, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as “Sum” and unit rate/quantity for provision being shown as “month”.</p> <p>Quantity in “months” shall be of the required period for provision which will usually be the Time for Completion and any required time during the Defects Notification Period.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>
1.20.8 Community Medical Support	<p>The Employer, by agreement with JICA, may also wish to extend the provision of first aid, medical and health services and facilities at the Site for the use of any local community or third parties or neighbours, not connected with the Works but living directly adjacent to and potentially affected by the Works.</p> <p>If this becomes a requirement, the scope, extent and duration of such services and facilities shall be carefully described in the documents together with the responsibility (if any) and obligations of the Contractor (or Employer) to insure.</p>
1.22 Fire Fighting Services	<p>Without reducing the Contractor’s obligations, the Bidding Documents shall describe the particular scope of fire-fighting arrangement that are to be provided by the Contractor for the</p>

JSSS Reference	Particular Requirements to be stated
	<p>Works.</p> <p>An appropriate pay item shall be included for this in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as “Sum” and unit rate/quantity for provision being shown as “month”.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>
1.23 Emergency Response Plan	<p>In higher risk areas, the Employer may require the Contractor to establish, train and maintain a specialist team at the Site to assist in the event of an emergency as described in JSSS 1.23. The Bidding Documents shall specify the size of the team and shall also specify in detail the equipment to be provided so that the Contractor is made fully aware and is able to assess the extent, risk and cost of the requirements.</p> <p>An appropriate pay item shall be included for this in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as “Sum” and unit rate/quantity for provision being shown as “month”.</p>
1.26 Project Safety Committee	<p><i>(On large Projects with multiple contract packages and contractors)</i> The Bidding Documents shall state if a Project Safety Committee is to be established for the Project and describe any further requirements.</p>
1.27 Health and Safety Coordination with Other Contractors, refer also to GC 2.3 [Employer’s Personnel]	<p>(JSSS 1.27.2) The Bidding Documents shall describe the individual scope of Works for any other contractors to be employed by the Employer on the Site and where possible identify them by name. Also list any legally constituted public authorities who may be employed in the execution on or near the Site of any work not included in the Contract, and specify scope, working locations, access and timing as far as possible.</p>
1.33 Health Matters	<p>The Bidding Documents shall include a listing and description of the additional services and facilities that Bidders are required to provide at the Site in addition to those already required by GC 6.7 [Health and Safety] due to the distance from urban areas, lack of immediate availability of suitable medical facilities, where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works.</p> <p>Examples of additional facilities include:</p> <ol style="list-style-type: none"> (1) Enhanced medical staff with qualified doctor(s). (2) Enhanced first aid and treatment facilities and staff. (3) Enhanced medical equipment, medical supplies, medicines and drugs.

JSSS Reference	Particular Requirements to be stated
	<p>(4) Additional treatment and recovery rooms.</p> <p>(5) An equipped ambulance based at the Site with qualified driver and attenders on full time twenty-four (24) hour, seven (7) day per week, stand-by duty.</p> <p>(6) Emergency air-ambulance services.</p> <p>In addition to stating as above, if there is a requirement for such additional facilities, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as “Sum” and unit rate/quantity being shown as “month”.</p> <p>Quantity in “months” shall be of the required period for provision which will usually be the Time for Completion and any required time during the Defects Notification Period.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>
1.34 Temporary Works	<p>The Bidding Documents shall state if Bidders shall comply with BS5975: 2019 on the Works, for which purpose, reference shall be made to the basic criteria described in JSSS 1.34.</p> <p>If Bidders are required to comply with BS5975: 2019, the Bidding Documents shall include a listing and description of the required staff for the coordination, design and supervision of the Temporary.</p> <p>Examples of such staff include:</p> <ol style="list-style-type: none"> (1) Temporary Works Coordinator (TWC). (2) Temporary Works Designer (TWD). (3) Temporary Works Supervisor (TWS). <p>The Bidding Documents shall require Bidders to name TWC and TWD in the Bid for which purpose reference is to be made to this Annex 1.3.</p> <p>If Bidders are NOT required to comply with BS5975: 2019, the Bidding Documents shall state that Bidders are to comply in any event with the requirements of JSSS 1.34.12 and submit full details in the Safety Plan.</p> <p>In addition, separate written justification shall be provided by the Executing Agency to JICA.</p>
1.35 User Training	<p>The Bidding Documents shall state whether User Training of Employer’s Personnel is required so that the Works or any part or</p>

JSSS Reference	Particular Requirements to be stated
	<p>Section thereof can be used, operated and maintained safely.</p> <p>If it is required, the Bidding Documents shall modify or add to the requirements of JSSS 1.35 and state the precise requirements including details of required training, numbers of candidates and duration of training.</p> <p>This shall be determined by the scope and nature of the Works and the number of users, management staff, operators, maintenance staff who will be engaged upon the Works.</p> <p>Lessons will be full-time.</p> <p>The Contractor shall design syllabi to compliment the training courses and in addition to user training, syllabi shall include health and safety training to an international level of appreciation with a general introduction to OSHA and other international safety standards and regulations. The Contractor shall test candidates upon completion of their course, prepare and issue certificates of attendance and successful completion of each course.</p> <p>In addition to stating as above and if there is a requirement for such user training, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items for:</p> <p>Assignment of teachers for user training Unit: man-month Quantity: Total estimated man-months</p> <p>Provision and use of Training Facilities: Sum</p> <p>If any Training Facilities are to be handed to the Employer or issued to candidates, then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such Training Facilities shall remain the property of the Contractor and shall be removed on completion.</p>
Work in Operational Areas	<p>If the Works are to be executed in whole or in part in Operational Areas (as defined in Annex 1.1) this shall be stated and times of operation and conditions with any restrictions on the Contractor's working methods, times and arrangements shall be described in detail.</p> <p>The respective responsibilities for insurance, health and safety management, security, health and welfare facilities, etc., between the Employer and Contractor(s) shall be clearly described so that there is no doubt over what each party is to perform or provide. A copy of the Employer's working procedures, including their health and safety procedures shall be provided to Bidders for their study during the Bidding period.</p>
Temporary Perimeter Fencing:	<p>The Bidding Documents shall describe the required Perimeter fencing the showing the required extent, constructional details and specification, whether temporary or permanent and this shall also be shown on the Drawings.</p>

JSSS Reference	Particular Requirements to be stated
	<p>Permanent or temporary fencing within the Site shall be described and shown for example around hazardous areas or around operating plant areas.</p> <p>Gates barriers and other treatment at Site entrances shall be described together with any arrangements for communications, lighting and power supply.</p> <p>Requirements for security at the Site entrance and also around the site shall be described and whether this is to be provided by the Contractor or the Employer.</p>
<p>Offices, Accommodation and Related Amenities and Facilities</p>	<p>The Bidding Documents shall describe the required Employer's, Engineer's and Contractor's construction offices, staff accommodation and related amenities and facilities to be provided by the Contractor and describe the responsibility for the maintenance and repair of same. The Bidding Documents show the required scope, design, constructional details and specification, whether temporary or permanent and this shall also be shown on the Drawings.</p> <p>The Contractor's responsibility for potable water supply, water and power supply, waste water and sewage drainage and treatment shall be clearly described and shown.</p> <p>The extent of provision by the Contractor shall take due account of the nature and location of the Site and the condition of access thereto.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>

To assist with compliance of the above requirements, a checklist has been prepared and is attached to this Annex 1.3.

A1.3.3 Required Detail of Bid Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Safety Plan, page BF-33.

Delete “[Insert Safety Plan]” and in this place insert the following:

Copy and paste here the exact same final text of JSSS Annex 1.2 as ultimately agreed.

A1.3.4 Bid Evaluation Requirements for Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section III. Evaluation and Qualification Criteria, 1, Evaluation, 1.1 Evaluation of Technical Bids.

(Applies to both Section III. Evaluation and Qualification Criteria (Following Prequalification) and Section III. Evaluation and Qualification Criteria (Without Prequalification), Pages EQC-1)

In the paragraph stating [Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilise key equipment and personnel for the

Contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI, Works Requirements.] *insert “and Safety Plan” in the third line after the words, “work methods”.*

Insert the following additional paragraph after the above paragraph:

“Evaluation of the Safety Plan shall take account of the Health and Safety Officer, and if compliance with BS5795: 2019 is a specified requirement of the Bidding Documents (refer to JSSS Annex 1.3) of any principal Temporary Works coordination, design and supervision staff, in item 1.1.2 Personnel and of PPE and any other safety equipment from the Safety Plan in item 1.1.3 Equipment.”

A1.3.5 Health and Safety Officer and (if applicable) Temporary Works staff:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders Section III. Evaluation and Qualification Criteria against 1.1.2 Personnel.

Delete position 2 as stated and insert as follows:

2 Health and Safety Officer at the Site

Delete position 3 and the words “e.g. Health and Safety (Accident Prevention Officer) and insert the following:

(if any of the following are a specified requirement of the Bidding Documents by reference to JSSS Annex 1.3):

3. Temporary Works Coordinator

4. Temporary Works Designer

5. Temporary Works Supervisor

On the following line insert the words:

Other personnel to be inserted as appropriate.

Under “Notes for Employer” delete notes 1 and 2 and in this place insert the words:

The proposal for all required personnel shall be evaluated.

A1.3.6 Bidder’s Safety Declaration (Form JSSS/BSD):

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms

Include “Form JSSS/BSD – Bidder’s Safety Declaration” in the Bidding Documents after the existing Form-ACK, with new page BF-56; renumber existing pages BF-56 and BF-57 appropriately and insert suitable reference in the Table of Forms on page BF-1.

The Employer requires all Bidders to appoint the Health and Safety Officer at the Site (HSO) prior to Bid submission and this HSO shall sign Form JSSS/BSD in addition to the Bidder’s Official Representative.

Please refer to end of this JSSS Annex1.3 for a copy of Form JSSS/BSD

Amendments to JSBD Part 3 - Particular Conditions of Contract

The following GC Sub-Clauses are to be modified as stated and as a consequence, future reference to these numbered Sub-Clauses, shall be to PC rather than GC.

A1.3.7 Submission and Review of Method Statements and Safety Plans:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause	GC	4.1	<i>Delete that part of the fifth paragraph of this Sub-</i>
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Contractor's General Obligations	<p><i>Clause which states:</i></p> <p>The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.”</p> <p><i>and in this place insert:</i></p> <p>(a) The Contractor shall, whenever required by the Engineer, submit Method Statements and/or Safety Plans each with details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the request.</p> <p>(b) The Engineer may review the Method Statements and/or Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Method Statement and /or Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.</p> <p>If the Engineer gives no such notice of non-compliance for the original Method Statement and/or Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted Method Statement and/or Safety Plan within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement and/or Safety Plan subject to complying with his other obligations under the Contract.</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(d) The Contractor shall submit a revised Method Statement and/or Safety Plan whenever required by the Engineer or when any previous Method Statement and/or Safety Plan for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site in accordance with the requirements described in items (a) to (c) above.</p>
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A1.3.8 JSSS Comprised as Part of the Contract with Further Safety Requirements:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause GC 4.8 Contractor's Health and Safety Obligations</p>	<p><i>Delete this Sub-Clause completely and replace with the following:</i></p> <p>The Contractor shall:</p> <ul style="list-style-type: none">(a) Comply with all applicable health and safety Laws of the Country, all standards and regulations,(b) Comply with all applicable health and safety obligations specified in the Contract including those contained in the JICA Standard Safety Specification (JSSS) and which as an entire document is to be read and construed as an integral part of the Contract by virtue of this Contract Sub-Clause amendment;(c) Comply with all directions issued by the Contractor's Health and Safety Officer (appointed under Sub-Clause 6.7 [<i>Health and Safety</i>] as amended by this JSSS Annex 1.3;(d) Take care of the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed;(e) Keep the Site, the Works (and the other places (if any) where the Works are being executed) clear of unnecessary obstruction so as to avoid danger to these persons;(f) Provide fencing, lighting, safe access, guarding and watching of:<ul style="list-style-type: none">(i) the Works, until the Works are taken over under Clause 10 [<i>Employer's Taking Over</i>]; and(ii) any part of the Works where the Contractor is executing outstanding works or remedying any defects during the Defects Notification Period; and(g) Provide any Temporary Works (including roadways, footways, guards and fences) that may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land and property. <p>Within twenty-eight (twenty-eight (28) days of the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site, the Contractor shall submit to the Engineer for information an updated Safety Plan for the whole of the Works</p>
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	<p>showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>This shall be based upon the Safety Plan issued at bid stage, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan to demonstrate the Contractor's intended compliance with the Contract.</p> <p>This document shall be in addition to any other similar document required under applicable health and safety Laws of the Country.</p> <p>This Safety Plan shall set out or refer to all the health and safety requirements:</p> <ul style="list-style-type: none">(a) that are stated in JSSS;(b) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and(c) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Works are being executed. <p>Requirements for submission by Contractor and response (if any) by the Engineer, shall be in accordance with GC 4.1 [<i>Contractor's General Obligations</i>] as amended by Annex 1.3.</p> <p>The Safety plan shall be revised as necessary by the Contractor or the HSO or at the reasonable request of the Engineer and each revision shall be submitted promptly to the Engineer for his information.</p> <p>In addition to the safety reporting requirements of sub paragraph (g) of Sub-Clause 4.21 [<i>Progress Reports</i>] the Contractor shall inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.</p> <p>The Contractor shall, comply with the health and safety recording and reporting requirements of JSSS.</p> <p>The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p> <p>Compliance with the Safety Plan and JSSS shall not</p>
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	relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.
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A1.3.9 Change “accident prevention officer” to “Health and Safety Officer”:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause GC 6.7 Health and Safety	<i>In the second paragraph, delete the words “accident prevention officer at the Site” and insert “Health and Safety Officer at the Site”</i>
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A1.3.10 Revised Order of Priority of Documents

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause GC 1.5 Priority of Documents	<p><i>Delete sub-items (a) to (i) and insert the following sub-items (a) to (j):</i></p> <ul style="list-style-type: none"> (a) the Contract Agreement (if any), (b) the Letter of Acceptance, (c) the Letter of Tender, (d) the Particular Conditions - Part A, (e) the Particular Conditions - Part B, (f) these General Conditions, (g) the JICA Standard Safety Specification (JSSS) and the signed Bidder’s Declaration, (h) the Specification, (i) the Drawings, and (j) the Schedules and any other documents forming part of the Contract.
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A1.3.11 Raised Awareness of Available Resources on ODA Projects

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause GC 6.9 Contractor’s Personnel	<p><i>Add the following paragraphs to the end of the existing Sub-Clause:</i></p> <p>The Contractor shall be deemed to be aware that in many countries and locations for which Overseas Development Assistance (ODA) is provided, the qualified, skilled and experienced Contractor’s Personnel required by this Sub-Clause is frequently not available or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, quality and performance that is demanded for these ODA Projects.</p> <p>The Contractor shall therefore be expected to source</p>
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	<p>and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries and all of whom shall be appropriately qualified, skilled and experienced to the standards required and sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.</p> <p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Contract.</p> <p>Without limiting the Contractor's obligations under the first two above added paragraphs of this Sub-Clause, the Contractor shall also employ counterpart local Contractor's Personnel with whom the Contractor shall implement a policy of mutual cooperation and ensure that this is adopted by all other Contractor's Personnel who shall work closely with and transfer necessary knowledge and skills to the counterpart staff to raise skill levels and awareness of international standards.</p> <p>The Contractor shall provide further skill training including classroom courses for all local personnel to compliment the direct on-job-training.</p> <p>The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic qualification, with copies provided to the Engineer if so requested by the Engineer.</p> <p>Details of such training shall be submitted with the Bid Safety Plan.</p> <p>Any such employment, training and academic qualification and employment of local personnel shall not mean that the Contractor can demobilise the imported resources unless the Contractor and Engineer are satisfied that the remaining Contractor's Personnel are able to act fully in accordance with the requirements of the Contract.</p>
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A1.3.12 Assignment of Foreign Personnel on ODA Projects

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause GC 6.12 Foreign Personnel</p>	<p><i>Insert the following additional paragraph after the first paragraph of Sub-Clause 6.12:</i></p> <p>Such foreign personnel shall be qualified, skilled and experienced Personnel of Operation Leader status or above.</p> <p>Unless otherwise stated in the Bidding Documents, the Contractor shall not bring into the Country any</p>
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	unqualified, unskilled or inexperienced foreign Contractor's Personnel.
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A1.3.13 Listing of Documents to be included in the Contract Agreement:

Part 3 – Conditions of Contract and Contract Forms, Section IX. Annex to the Particular Conditions - Contract Forms

<p><i>[Option A: One-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p><i>In paragraph 2. delete sub-items (i) to (ix) and insert the following sub-items (i) to (x):</i></p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Bid; (iii) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (iv) the Particular Conditions; (v) the General Conditions; (vi) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (vii) the Specification; (viii) the Drawings; (ix) the completed Schedules; and (x) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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and:

<p><i>[Option B: Two-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p><i>In paragraph 2. delete sub-items (i) to (x) and insert the following sub-items (i) to (xi):</i></p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Technical Bid; (iii) the Letter of Price Bid; (iv) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (v) the Particular Conditions; (vi) the General Conditions; (vii) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (viii) the Specification; (ix) the Drawings; (x) the completed Schedules; and (xi) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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Form JSSS/CPR - Checklist of Particular Requirements in Bidding Documents

[This form is to be prepared by the Executing Agency after completing the preparation of the PQ and Bidding Documents and submitted to JICA local office together with the Draft PQ and Bidding Documents when the concurrence of JICA is being requested for these documents]

JSSS Reference	Requirement:	Yes (✓)	No (✓)	If not default, explain why:	Default and Notes
1.5 Bidder's Safety Accreditation	<i>Required or not.</i>				Default is "Yes",
	<i>Documents fully amended</i>				Default is "Yes".
1.7 Engineer's Safety Representative	<i>Required to be assigned or not.</i>				Default is "No", not required except on large projects.
1.9 Contractor's Health and Safety Officer at the Site	<i>Required to be assigned full-time or not</i>				Default is "Yes", normally required to be full time
1.20 Accident Response Plan	<i>Additional facilities required at Site or not</i>				Default is "Yes", full detail shall be provided in Technical Specification" (unless local facilities are readily available)
1.20.8 Community Medical Support	<i>Required or not</i>				Default is "No", unless agreed earlier with JICA
1.22 Fire Fighting Services	<i>Additional facilities required at Site or not</i>				Default is "Yes", full detail shall be provided in Technical Specification" (unless local facilities are readily available)
1.23 Emergency Response Plan	<i>Full details of additional rescue facilities provided</i>				Default is "No", unless higher risk area
1.26 Project Safety Committee	<i>Required or not.</i>				Default is "No", not required except on large projects.
1.27 Health and Safety Coordination with Other Contractors, refer also to GC 2.3 [Employer's Personnel]	<i>Full details provided by Employer</i>				Default is "Yes". Full detail shall be provided in Technical Specification

JSSS Reference	Requirement:	Yes (✓)	No (✓)	If not default, explain why:	Default and Notes
1.33 Health Matters	<i>Additional facilities required at Site or not</i>				Default is “Yes”, full detail shall be provided in Technical Specification (unless local facilities are readily available)
1.34 Temporary Works	<i>Compliance with BS 5975:2019 required or not</i>				Default is “Yes”.
1.35 User Training	<i>Full details provided by Employer</i>				Default is “Yes”. Full detail shall be provided in Technical Specification
Work in Operational Areas	<i>Operational Areas exist on the Site?</i>				No default
	<i>If Operational Areas exist on the Site full detail provided?</i>				If applicable, default is “Yes”.
Temporary Perimeter Fencing:	<i>Full details provided by Employer</i>				Default is “Yes”. Full detail shall be provided in Technical Specification
Offices, Accommodation and Related Amenities and Facilities	<i>Full details provided by Employer</i>				Default is “Yes”. Full detail shall be provided in Technical Specification
A1.3.3 Required detail of Safety Plans	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.4 Bid Evaluation Requirements for Safety Plan	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.5 Health and Safety Officer and (if applicable)	<i>Bidding Documents amended to</i>				Default is “Yes”.

JSSS Reference	Requirement:	Yes (✓)	No (✓)	If not default, explain why:	Default and Notes
Temporary Works staff	<i>show the full requirements?</i>				
A1.3.6 Bidder's Safety Declaration (Form JSSS/BSD)	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.7 Submission and Review of Method Statements and Safety Plans	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.8 JSSS Comprised as Part of the Contract with Further Safety Requirements	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.9 Change "accident prevention officer" to "Health and Safety Officer"	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.10 Revised Order of Priority of Documents	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.11 Raised Awareness of Available Resources on ODA Projects	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.12 Assignment of Foreign Personnel on ODA Projects	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.13 Listing of Documents to be included in the Contract Agreement	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".

Name of Project:

Loan Number:

Package Number

Package Description

Signed:

Signed:

(Executing Agency: Official Representative)

(Consultant: Authorised Representative)

Signatory Name:

Signatory Name:

Date: _____

Date: _____

Address:

Address:

Form JSSS/BSD - Bidder's Safety Declaration

[Refer to earlier Annex 1.3 item 1.3.6: This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page BF-56; renumbering existing pages BF-56 and BF-57 appropriately and inserting suitable reference in the Table of Forms on page BF-1]

I, *[insert name and position of authorised signatory]*, being duly authorized by *[insert name of Bidder/members of joint venture ("JV")]* (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD hereby declare our commitment to comply with the requirements of the JICA Standard Safety Specification (JSSS).

The Bidder declares, that if selected to undertake the Works in connection with the Contract, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Employer's Personnel and the Contractor's Personnel and any other persons entitled to be thereon or that may be affected by operations thereby and that the Bidder is aware and accepts to follow all of the relevant health and safety Laws of the Country and the requirements of JSSS.

Irrespective of the Laws of the Country and the enforcement or otherwise of same, the Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, Personal Protective Equipment, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder declares that he will import for sole use upon the Works (where not available in the Country):

1. New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old unless otherwise pre-inspected at origin by the Engineer at the Contractor's expense and pre-approved), all fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, academic qualification, experience and capability;
3. Fully inform workers about hazards;
4. Provide health and safety training to all Contractor's Personnel and Employer's Personnel in a language and vocabulary they can understand;
5. Keep accurate records of work-related injuries and illnesses;
6. Perform tests in the workplace, such as air sampling as required by JSSS;
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned;

9. Provide eyesight, hearing and mobility examinations and other medical tests required by JSSS;
10. Post injury and illness information and data where workers can see them;
11. Inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately; and
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if he is successful with his Bid, the Health & Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If our Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety
Officer at Site)

Name:

Date: _____

Annex 1.4: Form JSSS/SAR - Sample Accident Report

[This form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.21. The Engineer shall forward a copy to the JICA local office for JICA information and record]

Name of Project:	Loan Number:
Package Number:	Package Description;
Contractor: (name and address)	Employer: (name and address)
Engineer: (name and address)	JICA Local Office Address:
Accident Report Submission Date and Number:	Issue Number:
FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location:	
4) Brief background and apparent cause:	
5) Number of casualties:	
6) Description of injuries incurred:	
7) Date, time and location of treatment:	
8) Present medical status of casualties:	
9) Present location of casualties:	
10) Present work status:	
SUBSEQUENT REPORT INFORMATION (POST-INVESTIGATION):	
1) Cause(s) of the accident:	
2) Longer term treatment of casualties:	

3) Assistance provided to casualties and their dependents:	
4) Settlement damages/expenses paid to casualties:	
5) Claims agreed and settled	
6) Covered by Contractor's insurance:	
7) Counter-measures to avoid recurrence of similar accidents and risks:	
8) Lessons learned from the accident:	
9) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
10) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
11) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
12) Other Information:	

<p>Report Prepared by:</p> <p>(name): _____</p> <p>(sign) : _____</p> <p>Report Submission Date(s) _____</p> <p>Time: _____</p>	<p>Contractor's Health and Safety Officer (HSO)</p>
<p>Receipt acknowledged by:</p> <p>(name): _____</p> <p>(sign): _____</p> <p>Report Receipt Date(s) _____</p> <p>Time: _____</p>	<p>Engineer</p>

Annex 1.5: Subjects of Skill Training Course for Counterpart Operation Leaders

Under FIDIC GC 6.9, “The Contractor’s Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations.”

This is a basic requirement and it is not incumbent upon the Employer to accept otherwise or to pay further for skill training of the Contractor’s Personnel to achieve this standard.

However please refer to JSSS 1.18 [Skill Training] which we have added to provide OJT and also classroom-based skill training for local counterpart Operation Leaders. The idea is that skill knowledge will be passed on by them in future.

We suggest that Skill Training shall be according to the scope of Works in the Project with the emphasis on direct OJT if necessary from foreign Operation Leaders.

This could/should be complimented by some classroom training, testing and even perhaps certifying in some way by the contractor.

However, the syllabus so far prepared is far too complicated and will be difficult to understand and apply.

Please can this be simplified.

Consideration must also be given to payment for this and it is necessary to include a simple payment mechanism in the Bidding Documents for such training otherwise it will not happen.

Please refer to Annex 1.3, where I have included some suggestions.

Annex 1.xxx: Dangerous or Harmful Operations

Recommend that this is not used

Dangerous Work has now been specifically defined (See Annex 1.1 definitions) and in a much wider sense and we recommend that this Annex 1.xxx is now not applicable and not necessary; it has little or no meaning.

Annex 1.xxx: Subjects of Special Education for Dangerous or Harmful Operations

Awaiting further information from NK

This is not recommended; the contractor is responsible for determining what is dangerous or not, not JICA and he is then responsible for whatever methods, education, choice of equipment etc. etc. to make certain that workers are able to work safely in such “dangerous” or “harmful operations”.

It is possible that if JICA state what education is required and if the contractor then chooses to employ an unqualified workforce but educates then as requested by JSSS and there is then an accident, JSSS/JICA could be adjudged in some way responsible.

We understood that this is not the intention of JSSS.

*When Contractor’s Personnel are engaged in any operations including potentially dangerous or harmful operations ALL personnel shall be selected by the contractor as qualified and experienced and given all necessary health, safety **and skill** training by the Contractor appropriate to the operations concerned. There is no advantage on giving examples to a contractor who should already know what is required, is responsible, is being paid for this and has insured for the consequences.*

Annex 1.xxx: Work Requiring the Assignment of an Operation Leader

Please refer to JSSS 1.19 and Annex 1 definition of Operation leaders.

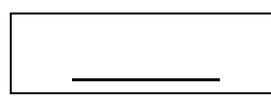
This Annex 1.xxx is not necessary, not recommended and potentiality creates a liability for JICA.

What if it excludes some work and there is an accident?

NO worker should be left to work on his own, ALL should be trained, skilled and guided and properly supervised.

Also, Operation Leaders are not by definition one type of skilled person, there are many different kinds each so qualified according to his skill group and trade.

Changes since last issue
Comments and /queries
Cross-reference



JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA



***Japan International Cooperation Agency
(JICA)***

_____, 2020

Prepared: DCI for NK
Issue: 5
Revision:
Date: 31/10/2019

Please note that the following two items are basic suggestions that require JICA further study and legal review with appropriate revision/correction. The disclaimer is based in part on the FIDIC Document.

NK are concerned that by proposing the use of JSSS to loan recipient governments, this may create a situation where JICA are seen as experts and that JSSS is perceived in some way as fully comprehensive and “superior”. NK fear that this may thereby create some obligation for JICA, possibly leading to a damage claim situation, where if an accident occurs, JSSS may not include sufficient or appropriate safety rules.

JICA have been advised of this requirement (see meeting 25 minutes) understand this advice and confirm in particular that the disclaimer will be reviewed by their legal officers.

ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources and expresses its gratitude to such other sources and publications which include:

1) Japanese Acts, Orders and Ordinances including:

Industrial Safety and Health Act

Order for Enforcement of Industrial Safety and Health Act

Ordinance on Industrial Safety and Health

Safety Ordinance for Cranes

Ordinance on Safety and Health of Work under High Pressure

Ordinance on Prevention of Anoxia, etc.

Ordinance on Prevention of Hazards Due to Dust

Explosives Control Act

Order for Enforcement of Explosives Control Act

Ordinance on Explosives Control

2) “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A..

3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.

4) Conditions of Contract for Construction For Building And Engineering Works Designed By The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)

DCI – Suggest that this is included as FIDIC second edition has been used (copied) in Annex 1.3 for PC/GC 4.8.

DCI: NK - Please confirm as above and insert further items as necessary to make this list comprehensive)

DCI: Can we please discuss later; has the exact text of the above documents been used as this is Acknowledgement? In English versions?

DISCLAIMER

JICA has prepared and issued this document in good faith for the reference of executing agencies, contractors and project teams engaged under the Japanese ODA programme, to encourage the attainment of a higher standard of health and safety management on its construction projects. JICA, together with the Executing Agencies of its ODA Projects shall not accept or assume any liability or responsibility for any events or the consequences thereof deriving from the use of this document. The document is provided without any express or implied warranty, including without limitation, warranties of accuracy, completeness, fitness for purpose, in general or on particular Projects and non-infringement. This document is intended to provide general reference and shall not be relied upon as a specific legal source or reference or used in any way as a basis of any claim by a contractor against any employer or vice versa under any contract for the execution of any Works.

JICA STANDARD SAFETY SPECIFICATION (JSSS)

Indicative Only

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JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

PREAMBLE NOTES

A. Purpose and Objective:

The Japan International Cooperation Agency (hereinafter referred to as “JICA”) require that all parties engaged upon their ODA Projects shall endeavour to establish and maintain a culture ensuring human security and the maintenance of human rights as an essential and fundamental feature. The common objective shall be the achievement of a zero-accident rate, adopting the slogan of “Safety First” by creating a working environment where health and safety are of the highest priority.

To assist with this objective, JICA have prepared and published this Standard Safety Specification (hereinafter referred to as “JSSS”) and which JICA aim to be adopted for future selected Projects by the Executing Agencies for such Projects.

JSSS is one component of the JICA overall strategy to successfully achieve “Quality Infrastructure” under its assistance and development programmes. JICA are committed to pursuing the highest achievable levels of quality, safety, environmental protection, harmony and efficiency in performance, “Ensuring Human Security” whilst ensuring that “Appropriate Cost Sharing” is achieved.

B. Effectiveness

JSSS has been published on-line by JICA and it shall become effective and be incorporated by Project executing agencies in the Bidding Documents (and therefore the Contracts) for particular Projects on the date that the ODA agreement for that Project is executed and where the parties to such ODA Agreement have formally and specifically agreed to adopt JSSS as the technical basis for Health and Safety management on that Project.

It is not intended to include or attach a hard copy of JSSS to Bidding Documents or the Contract for respective Projects but a copy of JSSS shall be available on JICA’s web site shown below:

[http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/_____](http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/)

C. Incorporation of JSSS into Contracts

~~Reference to JSSS and incorporation of the required amendments into the Bidding Documents for any Project with reference to JSSS on the website shall be sufficient to deem incorporation of JSSS into the Bidding Documents for that Project.~~

Where the parties to an ODA Agreement have formally and specifically agreed to adopt JSSS for a new Project, the Bidding Documents shall be amended to state this, in accordance with Annex 1.3 and Bids will be requested on this basis.

The Contract Agreement for the newly awarded Project shall include JSSS as a “further document” within the context of GC 1.1.1 [The Contract] and a hard copy of JSSS (current as at the Base Date of the Contract) shall be prepared and included with the documents comprised in the Contract for the Project.

Unless otherwise specifically agreed by JICA and the executing agency, JSSS shall not be applied to any on-going JICA funded Projects as at the date of publication of JSSS.

Where JSSS is already in use on any Project, by further agreement between JICA and the executing agency of any such on-going Project, future issues/revisions of JSSS may be applied after the date that such future issues/revisions are published on line subject to issue by the Engineer of an appropriate Variation under GC 13.1 [Right to Vary].

It is requested that the Employer, Engineer and Contractor will each print separate hard copies of the Contract issue of JSSS for their own reference and all of these entities shall fully

inform their personnel, Subcontractor's, sub-consultants and all other parties who are associated with the particular Project of the existence, content and purpose of JSSS and the objectives thereof.

It is the intention of JICA to formally update their separate "Standard Bidding Documents under Japanese ODA Loans" with instructions for the amendment of Bidding Documents to incorporate JSSS, however in the meantime relevant changes shall be made in accordance with Annex 1.3.

JSSS shall thereafter become an integral part of the Bidding Documents for particular Projects and requirements can be implemented immediately after the Executing Agency has made the required modification to the Bidding Documents, and thereafter JSSS shall be read and construed as a part of the Bid and therefore the Contract for that Project.

D. Compliance and General Obligations

JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

The Contractor shall ensure that all health and safety hazards and risks are properly identified, evaluated and controlled prior to commencement of any work. Only suitably qualified, fit and competent persons shall manage the health and safety activities.

Compliance with the JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract and shall not impose or imply any role or responsibility upon the Employer or the Employer's Personnel for health and safety or management of the Works all of which is to be performed by the Contractor under the Contract for the Project.

Where the Laws of the Country so state, the Health and Safety Officer (as defined herein) shall be qualified and legally registered as such in accordance with such Laws.

Similarly, JSSS shall not limit the Contractor to the scope contained herein.

These Preamble Notes and all Annexes to this Chapter 1: General Requirements shall be read and construed as integral parts of JSSS and therefore shall be deemed to constitute integral parts of the Contract for the Project.

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

JICA REQUIREMENTS

1.1 Employer's Safety Declaration

By entering into a Contract, the Employer (together with the Engineer acting as his consultant) declares that he shall collaborate in good faith with the Contractor and take all reasonable measures within his authority and under his control to promote the highest achievable health and safety standards in the execution of the Works all in accordance with his contractual and statutory responsibilities and adopting the slogan:

“SAFETY FIRST”

The Contractor shall aim to achieve “Zero-Accident” in the execution of the Works by taking full responsibility for the health and safety management of the Works and adopting JSSS that specifies the minimum safety requirements that the Contractor shall implement.

A Bidder's Safety Declaration shall be submitted with the Bid, declaring the Bidder's commitments and obligations, in accordance with Annex 1.3.

1.2 Definitions, Abbreviations and Standards

1.2.1 For Definitions, abbreviations and standards contained throughout JSSS, refer to Annex 1.1.

1.2.2 The following further requirements relate generally to the use of the definitions contained in the Contract and in Annex 1.1:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (3) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (4) Any reference to academic qualification of Contractor's Personnel within this document and unless otherwise stated, shall mean a currently valid academic qualification demonstrated by a certified true diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an equivalent diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.
- (5) Any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor's Personnel shall also be deemed to include the provision by the Contractor of the same such safety measures for Employer's Personnel and any other persons that are entitled to be on the Site and other places (if any) where the Works are being executed.
- (6) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

1.3 Application to Grant Aid and other Projects

1.3.1 JSSS has been drafted to apply to JICA ODA Loan Projects and to the relevant FIDIC harmonised form of Contract for such Projects as referred to **JSSS 1.2 (Definitions, Abbreviations and Standards) item (6)**.

1.3.2 **JSSS shall apply equally** to other JICA assisted Projects that have been awarded under different forms of contract including those under Contractor design contracts and contracts under the JICA Grant Aid programme. When so used, suitable modification shall be required to the definitions and text of JSSS and the Bidding Documents for those Projects to ensure compatibility and consistency with the relevant contract requirements for the Project, reflecting the same intentions, standards and procedures for improving health and safety.

1.4 JSSS - Laws and Reference StandardsThe Contractor shall comply as a minimum with the Laws of the Country, including all health and safety standards.

1.4.2 If the Employer has formally agreed with JICA to adopt JSSS for the Project, then the requirements of JSSS shall apply and prevail where the particular standards of JSSS are considered by the Engineer to be higher than the technical requirements of the Laws of the Country without limiting the Contractor's legal duties and obligations under such Laws.

1.4.3 Otherwise where the Laws of the Country (including any health and safety standards) are silent on particular health and safety requirements and where provisions are included in JSSS then JSSS shall apply and prevail.

1.4.4 JSSS is an abbreviated document and where specifically stated it requires specific compliance with the specified technical requirements of OSHA. As a general rule, where JSSS contains insufficient or no technical regulations or no detailed technical requirements then the related detailed technical regulations of OSHA as a "catch-all" or at least equivalent shall apply.

"At least equivalent" in this context shall mean the standards of an internationally recognised health and safety organisation or authority of the same or similar detail, content, coverage and international acceptance as OSHA, (such as HSE or similar), as proposed by the Bidder in the Bid Stage Safety Plan.

This shall be evaluated by the Employer and agreed between the Parties prior to execution of the Contract Agreement. If in the opinion of the Employer, the standard proposed by the Bidder is not equivalent to OSHA, HSE or similar, then the Employer will choose to apply OSHA as the "catch-all".

Any subsequent requirements for particular reference standards shall be as proposed by the Contractor and given consent by the Engineer on the same basis.

1.4.5 JSSS prescribes minimum requirements and the parties are free to include higher standards when so agreed between Contractor, Employer and Engineer.

1.4.6 The Contractor shall be deemed to have studied and familiarised himself with the Laws of the Country and to have ascertained if any part of such Laws is superior to any of the particular requirements of OSHA, in which case such particular Laws shall apply and the Contractor shall inform the Engineer accordingly.

1.4.7 The reference standards used in JSSS can be substituted with alternative standards after requesting and obtaining the consent of the Engineer who may give such consent only if in his opinion such alternative standards provide an equivalent or higher standard of health and safety than that required by JSSS.

1.4.8 Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.4.9 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation, the requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.

1.5 Contractor's Safety Certification

DCI: NK: Please confirm if this certification is required and if so is it to be a Bid Qualification requirement (we do recommend that it is). Refer to Annex 1.3 where this is made this optional

1.5.1 Unless otherwise expressly stated in the Bidding Documents (refer to Annex 1.3), the Contractor shall be formally accredited for complying with the Occupational Health and Safety requirements of OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally accredited organisation as determined by the Employer (if to be determined at Bid Evaluation stage) or Engineer (during the Project implementation stage). The Contractor shall possess a current and valid certification at all times.

1.5.2 If accreditation is required by the Bidding Documents, an original or authorised true copy of the current certification shall be submitted as an attachment to Form ELI -1: Bidder Information Form and ELI-2 Bidder's Party Information Form and this shall subsequently be included with the Contract.

1.5.3 The Contractor shall submit original or authorised true copies of subsequent annual renewals to the Engineer when same are due.

1.6 Contractor's Safety Plan

1.6.1 The Contractor shall be required to submit the Safety Plan principally at two stages:

(1) With the Bid submission.

(2) Within twenty-eight (28) days of the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site, refer to GC 4.1 [Contractor's General Obligations], as amended by Annex 1.3.

1.6.2 The Safety Plan is intended to provide an accurate and comprehensive indication of what will be provided or performed by the Contractor to ensure that health and safety management is maintained at a high level throughout the Time for Completion of the Works. The Contractor shall update and revise the Safety Plan at any stage to reflect actual requirements.

1.6.3 Submission of any Safety Plan and inclusion in the Bid or Contract or following any submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility and at any time throughout the Time for Completion of the Works.

1.6.4 For details of the Safety Plan at Bid stage, refer to Annex 1.2 [Detail of Safety Plans in Bidding Documents].

1.6.5 For details of the Safety Plan at commencement stage, refer to Annex 1.3, Clause 1.3.7 and GC 4.8, [Contractor's Health and Safety Obligations] as amended by Annex 1.3.

1.6.6 Further revision of Safety Plans

DCI: I recommend that automatic submission of "Particular Safety Plans" is confusing and not necessary and has no meaning when the following is considered in conjunction with revised Sub-Clause 4.8 (see Annex 1.3, Sub-Clause 1.3.7)

The Safety Plan (or parts of it) shall be revised or supplemented to suit changing circumstances or conditions at the Site or where considered necessary by the HSO or when required by the Engineer in accordance with GC 4.1 [Contractor's General Obligations], as amended by Annex 1.3.

The Safety Plan (if necessary supplemented with later particular safety plans) shall ensure that the Engineer, is made aware in writing of at least the following information for all parts of the Works, in any event not less than twenty-one (21) days before commencing any parts of the Works:

- (1) Work outline, work procedure and order of carrying out the work;
- (2) Number of Contractor's Personnel;
- (3) Safety management system and responsibility and authority of Contractor's Personnel;
- (4) Risk assessments;
- (5) Safety measures;
- (6) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE);
- (7) Safety education and training of the Contractor's Personnel and TBM;
- (8) Teaching materials used in education, training and pre-operation TBM before work;
- (9) Method of information sharing and communication among the Contractor's Personnel;
- (10) Implementation and monitoring of measures for health and safety management;
- (11) Reference technical safety standards;
- (12) Temporary Works;
- (13) Accident Response Plan;
- (14) Health Care Plan;
- (15) Fire Fighting Services; and
- (16) Emergency Response Plan.

1.6.7 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.

1.6.8 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.

1.6.9 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed of all hazards and risks on the Site.

1.6.10 The procedural flow of risk assessment shall be as follows.

- (1) Identifying hazards.
- (2) Evaluating risks.
- (3) Determining measures of risk reduction.

1.6.11 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:

- (1) Removal of hazards such as eliminating dangerous works.
- (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
- (3) Engineering measures.
- (4) Management measures – enhanced training and skills.
- (5) Use of PPE.

1.7 Engineer's Safety Representative

1.7.1 On larger Projects with multiple contract packages and contractors, and if so stated in the Bidding Documents for those Projects, the Engineer may appoint an assistant under GC 3.2 [Delegation by the Engineer] to be known as the Engineer's Safety Representative (ESR) and who shall be responsible for health and safety within the Engineer's organisation on Site and for monitoring the Contractor's compliance with each contractor's Safety Plan.

In such case and by written notice served under GC 3.2 [Delegation by the Engineer], the Engineer shall delegate authority to the Engineer's Safety Representative to represent the Engineer in matters of health and safety at Site, to issue written instructions to the Contractor on matters of health and safety and monitor compliance with such instructions which shall include:

- (1) Instructions requiring the Contractor's compliance with the Safety Plan.
- (2) Emergency instructions to Contractor to stop working where the Engineer observes accidents, near misses or unhealthy or unsafe conditions.
- (3) Instructions requiring the Contractor to change the working methods at the Site to improve health and safety.

1.7.2 The Engineer's Safety Representative shall cooperate and work closely with the HSO and will represent the Engineer on Joint Site Safety Inspections and also undertake independent and regular inspections of the Works at the Site.

1.7.3 The Engineer's Safety Representative shall give safety compliance instructions to the Contractor in accordance with his/her delegated authority under GC 3.3 [Instructions of the Engineer].

1.7.4 The Contractor shall take corrective action within the time limit prescribed in the instruction, shall keep the Engineer's Safety Representative fully informed on progress and shall report in writing when the corrective action is completed.

1.7.5 If the Bidding Documents state that the appointment of a full-time or part-time Engineer's Safety Representative is not required (refer to Annex 1.3), it is to be assumed that the Engineer's representative at the Site shall act in this capacity.

1.8 Safety Compliance Instructions from the Engineer

1.8.1 Without affecting or diminishing the Contractor's responsibility under GC 4.1 [Contractor's General Obligations] as amended by Annex 1.3, to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.

If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [Suspension of Work] until the Contractor has taken corrective and preventive measures to ensure that no further risk exists.

If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [Suspension of Work] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated and proposed to the Engineer and implemented at the Site, to ensure that no such accident can reoccur.

1.8.2 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.9 Contractor's Health and Safety Officer at the Site.

1.9.1 Requirements for the HSO:

- (1) The Bidder shall name the HSO in the Bid and thence the same person shall be named in the Contract. The Contractor shall assign the named HSO upon the Site of the Works on or before the Commencement Date.
- (2) If the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor's Personnel] as amended by Annex 1.3, or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a another—suitable replacement person to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor and not of a Subcontractor or consultant and unless otherwise stated in the Contract, the HSO shall be assigned full time upon the Works and his/her responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety] as amended by Annex 1.3.
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate academic qualification for such position if required by the Laws of the Country and also (if so required) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall be fluent in the language for communications stated in the Contract as defined in GC 1.4 [Law and Language]. The HSO shall preferably also be fluent in the ruling language of the Contract (if different) however it is acceptable for the HSO to use a translator for this language only.
- (7) Where there is no legal requirement under the Laws of the Country for academic qualification, the HSO shall have appropriate academic qualification for health and safety, work experience in construction (minimum ten (10) years) and in health and safety management (minimum five (5) years which can be concurrent with construction experience) and two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country and whom the Contractor considers is qualified to perform the duties subject to receiving the consent of the Engineer.
- (8) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his/her duties.
- (9) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO including additional managers, assistants and inspectors all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.
- (10) The HSO (where necessary with the assistance of his qualified support staff) shall personally be capable to ensure that:
 - (a) All working areas of the Site are inspected on a regular basis (at least once every working day) to detect if any unsafe practices, works or conditions exist; and

- (b) If such unsafe practices, **works or** conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this not possible then to temporarily stop all construction activity on that part of the Works until such **corrective** action has been taken.

Any site inspections attended by the HSO, may also include the **attendance of the Engineer or his safety representative.**

1.10 HSO - Scope of Duties

1.10.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.10.2 The particular scope of duties of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Work:
 - (a) Preparation of Safety Plans, implementation, evaluation, improvement, revision and submission thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) **Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan;**
 - (d) **Temporarily stopping or suspending the Works or any part of the Works following any accident or where the HSO discovers any unsafe conditions, unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan;**
 - (e) **Temporarily stopping or suspending the Works or any parts of the Works where the Engineer so instructs in accordance with **JSSS 1.8;****
 - (f) **Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;**
 - (g) **Preparing proposal, reporting and consulting with the Engineer including when an accident occurs or any risk or hazardous situation is likely;**
 - (h) **Appointment of health and safety inspectors and assistants after obtaining the consent of the Engineer; and**
 - (i) **Consultation on safety management with the Employer's Personnel.**
- (2) Instructing the Contractor's **Personnel to take** improvement measures for maintaining health and safety and preventing accidents.
- (3) **Assistance with selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability.**
- (4) Planning and implementation of various training and education implementation plans.
- (5) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases.
- (6) Preparing regular internal and external reports on health and safety activities.
- (7) Hazard prediction activity.

1.11 Procedure for Resuming the Works

If the Engineer has issued an instruction under JSSS 1.8 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped or suspended the Works or any part of the Works in accordance with JSSS 1.10 [*HSO – Scope of Duties*] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and cannot reoccur.
- (2) The Contractor shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within fourteen (14) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving seven (7) days' notice in writing of the resumption date.
- (5) The Contractor resumes the Works or part of the Works on the resumption date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.12 Contractor's Safety Management Activities

1.12.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.12.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

- (1) Overall **Safety** Management Activities:
 - (a) Arranging, chairing, attending meetings as described above and other internal contractor meetings including TBM;
 - (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and
 - (c) Monitoring the implementation of the Safety Plan.
- (2) **Safety** Management of Contractor's Personnel:
 - (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, toolbox meetings, providing general advice and instruction, specific instructions on individual works, safety confirmations, information to be conveyed etc.
 - (b) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as:

5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline.

KIKEN YOCHI TRAINING (KYT) for hazard prediction training usually in TBM, where: K = kiken (hazard), Y = yochi (prediction) and T = training.

- (c) Instruction and management of safety education and training.
- (d) Instruction and management of all safety measures.
- (e) Joint Site Safety Inspections

1.13 Joint Site Safety Inspections

- 1.13.1 In addition to the Contractor's own daily Site Safety Inspections, the Contractor shall conduct regular Joint Site Safety Inspections with the Engineer or (if appointed) the safety representative of the Engineer. Respective safety staff may also attend.
- 1.13.2 Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.13.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.13.4 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer **within seven (7) days** after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.14 Compliance Monitoring and Auditing

- 1.14.1 The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured and that such compliance is monitored efficiently and transparently at all times, for which purpose the Contractor shall:
- (1) Create checklists for monitoring.
 - (2) Carry out regular and irregular inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions.
 - (4) Create files and safe storage systems for the monitoring records.
 - (5) Copy all relevant information to the Engineer as requested by the Engineer.
- 1.14.2 Safety inspections, are intended to search for risks and hazards, which present a threat to safe working.
- 1.14.3 The Contractor shall also carry out regular health and safety audits, to ascertain of the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:
- (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
 - (2) Are the Safety Plan requirements being met?
 - (3) Is there documented proof of compliance?
 - (4) Is health and safety training effective?
 - (5) Is the Contractor's health and safety management system working effectively?
- 1.14.4 The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the Works.
- 1.14.5 The audit team shall be headed by the Contractor's Representative and at least two other members of the Contractor's Personnel, preferably including an Operation Leader. The HSO may attend but only in an advisory capacity and team members shall not be required or allowed to audit their own work.
- 1.14.6 The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.

1.14.7 The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems; they shall not replace the regular health and safety inspections.

1.14.8 The audits shall be conducted on a random basis at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.

1.14.9 The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor.

1.14.10 A single prearranged annual audit is not recommended as it will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.

1.14.11 An audit report shall be prepared by the Contractor's Representative detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.

1.14.12 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.15 Proper Placement of Contractor's Personnel

1.15.1 To varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided. Only appropriate personnel shall be assigned, suitable and capable for the work tasks for which they are selected in terms of academic qualification, skill, experience and also in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct, workwear, tools and equipment, PPE and Safety equipment etc.

1.15.2 Construction labourers and manual workers shall never be assigned on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader of an appropriate grade to ensure that safe working practices are constantly applied.

1.15.3 The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.

1.15.4 The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.

1.15.5 The HSO shall countersign all such records to indicate his confirmation of the suitability of each member of the Contractor's Personnel prior to their placement. These records shall be made available for inspection by the Engineer.

1.15.6 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:

- (1) Work content and work environment.
- (2) Work experience, academic qualification and capability.
- (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
- (4) Allocation of an achievable and safe work volume and time.

- (5) Allocation to older workers and also to workers under 18 in compliance with GC 6.21 [Child Labour].

1.15.7 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic qualification, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel comply with such requirements

1.15.8 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic qualification, experience and skills.

1.15.9 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that he resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site unless otherwise approved by the Engineer and assigning a suitable replacement.

1.16 Safety Training Generally

1.16.1 The Contractor shall conduct health and safety education and training for all of the Contractor's Personnel.

1.16.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.

1.16.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid and the Contractor shall bear all necessary Cost and expenses.

1.17 Safety Induction Training

1.17.1 Safety induction training shall be provided by the Contractor for all Contractor's Personnel upon the Site when they commence work on Site and also when they are scheduled to change work type, skill or location. The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting any work.
- (5) Dangerous Works; General rules, locations, precautions and general working requirements. (Refer to separate requirements for special training).
- (6) PPE and other safety devices; use, handling and care.
- (7) Maintaining all areas of the Site in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment.
- (9) Fire Fighting; Actions, precautions and control.

- (10) Health and safety rules.
- (11) Causes and prevention of diseases that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

1.17.2 Practical on-Site demonstrations shall be included in every case and wherever possible.

1.17.3 The Contractor shall provide safety induction training to the Employer's Personnel and to any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed at the request of the Employer or Engineer.

1.17.4 Training Personnel

- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
- (2) All trainers shall be fluent in the language of the Country.
- (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic qualification, ability and experience, subject to receiving the advance consent of the Engineer.

1.17.5 Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.18 Skill Training

1.18.1 The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] as amended by Annex 1.3 which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.

1.18.2 The Employer requires the Contractor where possible to employ local workers, in particular potential counterpart Operation Leaders for each trade and skill group and operation and in the spirit of cooperation, the Contractor is requested to train and to transfer skills to such persons largely through OJT with the assignment of foreign Contractor's Personnel as required by GC 6.9 as amended by Annex 1.3.

In addition, and to compliment this OJT, the Employer requires the Contractor to provide classroom-based training courses and to assign qualified instructors to provide basic skill training to develop the ability of local counterpart Operation Leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots. Examples of the scope of this skill training are included in Annex 1.5xxx. The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for information. For further details refer also to Annex 1.3.

I suggest that the emphasis needs to be on OJT, specific syllabus of classroom training is determined by the scope of the projects therefore finite details of education are not considered necessary, suggest that general examples of requirements will be sufficient and better.

1.18.3 It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall automatically be locally employed and trained for the purpose, this remains as the Contractor's choice in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel (including foreign personnel if necessary) who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.

1.18.4 Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel] as amended by Annex 1.3.

1.19 Dangerous Work

1.19.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.19.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training pursuant to the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.19.3 A specially trained Operation Leader shall always be assigned to work full-time with every team of workers engaged upon Dangerous Work.

1.19.4 A Spotter shall also be assigned to stand adjacent to any Dangerous Work areas, ensuring that all is in order and where necessary to raise the alarm if there is any suggestion of difficulty, accident or emergency.

1.19.5 The Contractor shall select, train and equip specialist rescue teams at the Site, who can be called upon immediately in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment.

1.20 Accident Response Plan

1.20.1 The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] (as amended by Annex 1.3), in collaboration with local health authorities, to provide the following services and facilities and to make them available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel:

- (1) Medical staff.
- (2) First aid facilities.
- (3) Sick bay.
- (4) Ambulance service.

1.20.2 Where the Site of the Works is situated some distance away from urban areas and/or where there is a lack of immediate availability of suitable medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor's Personnel, to compensate for any lack of available services or facilities or lack of any local health authorities.

1.20.3 Such distant locations shall generally be defined as locations where the transfer time by road from the Site to a hospital with a suitably equipped and medically attended accident and emergency department, exceeds thirty (30) minutes, then the Contractor shall be responsible for providing such additional services and facilities at the Site to ensure that appropriate action can be taken within a maximum fifteen (15) minutes period. Additional facilities should for example include:

- (1) Enhanced medical staff with qualified doctor(s).
- (2) Enhanced first aid and treatment facilities and staff.
- (3) Enhanced medical equipment, medical supplies, medicines and drugs.
- (4) Additional treatment and recovery rooms.
- (5) An equipped ambulance based at the Site with qualified driver and attenders on full time twenty-four (24) hour, seven (7) day per week, stand-by duty.

1.20.4 Where the transfer time by road can exceed one (1) hour, emergency air-ambulance facility shall also be considered in addition to the above.

1.20.5 The Specification for all Projects shall include descriptions of the particular required services and facilities to be provided by the Contractor for this purpose (refer to Annex 1.3).

1.20.6 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue services and treatment using experienced and qualified medical staff and fully equipped facilities at the Site.

1.20.7 Medical and health services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel including their accompanying family members, all other persons (with accompanying family members) who are entitled to be on the Site and other places (if any) where the Works are being executed and at any accommodation for all such persons.

1.20.8 Unless otherwise stated in the Specification, first aid, medical and health services and facilities at the Site shall also be made available for the use of any local community, or third parties or neighbours not connected with the Works but living directly adjacent to and potentially affected by the Works.

NK/JICA please consider if above is required. See annex 1.3 where I have included optional items for this and Health Matters also and with payment.

1.20.9 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan including descriptions and where necessary details or quantities of:

- (1) Medical staff to be assigned at the Site.
- (2) Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.
- (3) Medical Facilities on the Site together with description of equipment and consumables.
- (4) Temporary water and power supply to maintain use during mains supply failure.
- (5) Type of communication facilities and measures for emergency response.
- (6) Deployment of appropriate first aid appliances, aids, instruments and medicines.
- (7) First aid training, appointment of first aiders and dissemination of information.

It is to be noted that GC 6.7 [Health and Safety] as amended by Annex 1.3, lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that are necessary to meet the high standard of health and safety management and provision expected at the Site.

It is also to be noted that Medical staff and facilities to be assigned at the Site, in addition to treatment for accidents are also required to provide welfare and hygiene requirements and assist with the prevention of epidemics. This shall also be adequately described in the Safety Plan.

1.21 Measures at the Time Accidents Occur

1.21.1 When an accident occurs, the Contractor shall immediately discontinue the work task and take all efforts to:

- (1) Safely locate and extract casualties.
- (2) Provide first aid treatment at the Site.
- (3) Provide other Accident Response measures
- (4) Implement Secondary accident prevention activities, including:
 - (a) Preserving the accident site, make safe and prevent anyone interfering or entering;
 - (b) Discontinuing construction work related to or in the vicinity of the accident; and
 - (c) Implementing any further measures instructed by the Engineer.

1.21.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident or illness in accordance with GC 4.8 [Contractor's Health and Safety Obligations] as amended by Annex 1.3.

DCI: NK, Please refer to Annex 1.4 where I have prepared and included an Accident Report based on your sample.

- (2) Having investigated and established the cause of any accident or illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures to prevent any reoccurrence and shall be in the format indicated in Annex 1.4.

1.21.3 For resumption of work procedures, refer to JSSS 1.11.

1.22 Fire Fighting Services

1.22.1 The Contractor is reminded of his obligations under GC 17.2.7 [Care of the Works].

1.22.2 Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor's Personnel and Employer's Personnel, to compensate for any such lack of available public services or facilities.

1.22.3 Such distant locations shall generally be defined as locations where the road journey time by fire engine from an equipped and attended public fire station to the Site exceeds thirty (30) minutes, then the Contractor shall be responsible for providing such additional services and facilities at the Site to ensure that appropriate action can be taken within a maximum fifteen (15) minute period. Such additional facilities may include:

- (1) An equipped fire engine based at the Site with qualified driver and crew on a full time twenty-four (24) hour, seven (7) day per week, stand-by duty.
- (2) Sufficient temporary water and power supply to maintain emergency use.

(3) Enhanced fire protection equipment and facilities around the Site.

1.22.4 The Contractor shall ensure that persons are kept safely away from any fire and where practicable and safe, to limit the spread of fire.

1.22.5 The Contractor shall select, train and equip specialist emergency fire-fighting teams at the Site, who shall be called upon immediately in the event of any fire, to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated by fire and to provide suitable, specialist and appropriate first aid and medical treatment.

1.22.6 The Specification for all Projects shall include descriptions of the particular required services and facilities to be provided by the Contractor for this purpose (refer to Annex 1.3).

1.22.7 For further information on this topic refer to Section 2.8 [Fire Prevention].

1.23 Emergency Response Plan

1.23.1 The Contractor shall take measures to keep all areas of the Site, all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, free from surface water and ground water at all times and by whatever means are necessary to ensure:

(1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.

(2) The safety and stability of the Works and Goods.

(3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent Landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.23.2 Without prejudice to GC 19 [Force Majeure], the Contractor shall take measures to prevent injury, damage and flooding from excessive rainfall and high winds consequent to hurricanes, typhoons, cyclones and tropical depressions directly affecting the Site(s) of the Works, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have reasonably avoided or overcome or lessened the effects.

Similarly, and where there is a risk of seismic or volcanic activity at the Site, the Contractor shall take measures to prevent Landslides and consequent injury, damage and flooding from such earthquakes and volcanic activity.

Such measures to be implemented (where applicable to the extent that advance notice and warnings permit) shall include:

(1) Designing (or avoiding the use of) permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially cause Landslides with consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed and to any third parties and neighbours and property not connected with the Works but potentially affected thereby.

(2) Provision of temporary support to all sides and soffits of excavations or tunnelling of sufficient strength, durability and suitability.

(3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.23.3 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3.

1.23.4 Unless otherwise stated in the Specification for the Project, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

This “plan” shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any (remaining) facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. This “plan” does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions given under the Contract.

1.23.5 The Emergency Response Plan, shall cover:

- (1) Evacuation plan.
- (2) Emergency contact system.
- (3) Procedures for assembly and locating assembly points and the like.
- (4) Use of existing and available medical and other related facilities.
- (5) Assisting with search and recovery.

The Emergency Response Plan shall be submitted as part of the Safety Plan and be updated as necessary throughout the Time for Completion of the Works.

1.23.6 The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.23.7 If required by the Specification, (refer to Annex 1.3), the Contractor shall set up an emergency search team (or teams) and train and equip same so that they are able to search, locate, extract and transfer any potential casualties to medical treatment facilities at the Site (if available) or otherwise assist as far as possible with removal to other available medical treatment facilities.

1.23.8 If required by the Specification, (refer to Annex 1.3), the Contractor shall conduct emergency response training based on the Emergency Response Plan at least six (6) months and including:

- (1) Training of the search and recovery team.
- (2) Training of the Site medical team to deal with likely trauma.
- (3) Training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.23.9 If and when an emergency occurs during the Time for Completion, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.23.10 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit and as instructed by the Engineer.

1.24 Contractor's Safety Committee and Regular Safety Meetings

1.24.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.24.2 Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of Contractor's Personnel including workers on Site.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.24.3 The HSO shall be the chairman of the Safety Committee.

1.24.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence;
 - (d) Hazards, safety and health problems resulting from:

- (i) Site inspections by HSO;
- (ii) Issues raised by the representative of Contractor's Personnel;
- (iii) Issues raised by Subcontractors; and
- (iv) Issues raised by others.
- (e) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (f) Safety instructions received from the Engineer;
- (g) Items to be coordinated with police, fire department and other related organisations;
- (h) Compliance and registration **requirements** under the Laws of the Country;
- (i) Safety and health awards, media attention and the like; and
- (j) Other matters.

1.24.5 Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.25 Engineer's Regular Safety Meetings

1.25.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to make commitments on health and safety matters on behalf of the organisations that they represent:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence;
 - (d) Hazards, safety and health problems resulting from:
 - (i) Inspections by the Engineer and the Employer.
 - (ii) Site inspections by HSO.
 - (iii) Issues raised by the representative of the Contractor's Personnel.
 - (iv) Issues raised by Subcontractors.
 - (v) Issues raised by others.
 - (e) Status of resolution of previous problems;
 - (f) Items to be coordinated with police, fire department and other related organisations;
 - (g) Compliance and registration **requirements** under the Laws of the Country;
 - (h) Safety and health awards, media attention and the like; and

- (i) Other matters.

1.25.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer with a further copy provided directly to the local office of JICA within the Country.

1.26 Project Safety Committee

1.26.1 On larger Projects with multiple contract packages and contractors and if so stated in the Bidding Documents for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.26.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.26.3 The Chairman of the Safety Committee shall be the Employer.

1.26.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.

1.26.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

1.27 Health and Safety Coordination with Other Contractors

1.27.1 Refer to GC 2.3 [*Employer's Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer, and
- (3) the personnel of any legally constituted public authorities,

who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to (1) and (2) above, the Employer shall ensure that such personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] as amended by Annex 1.3 and GC 4.18 [*Protection of the Environment*]

In relation to (3) above the Contractor shall ensure that such personnel are fully informed of the Contractor's Safety Plan and shall liaise and agree with such authorities to ensure that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Contractor is therefore required to contact such other contractors directly and liaise with them to obtain all such other information and incorporate this into the Safety Plan.

When risks arise because of potential interactions between the Contractor and other contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Contractor shall take a positive role in ensuring the general principles of risk prevention and control are applied amongst all contractors involved.

1.27.2 The Bidding Documents shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.27.3 If the above circumstances apply, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;
 - (c) Accidents, injuries and measures to prevent any reoccurrence;
 - (d) Status of resolution of previous problems;
 - (e) Items to be coordinated with police, fire department and other related organisations;
 - (f) Compliance and registration requirements under the Laws of the Country;
 - (g) Safety and health awards, media attention and the like; and
 - (h) Other matters.

1.27.4 Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the Engineer's monthly progress report.

1.28 Safety Statistics

1.28.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.28.2 Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, casualties, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.

- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes of them.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff, contents, frequency, participant, duration of safety education at site and safety event.
- (9) Others.

1.28.3 All data shall be in a format and content format and content to be approved by the Engineer.

1.28.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.28.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.29 [Safety Reports].

1.29 Safety Reports

1.29.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, improvement.
- (2) Joint Site Safety Inspections.
- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [Progress Reports].

1.30 Health and Safety Records

1.30.1 The Contractor shall keep health and safety records for the following:

- (1) Accidents, fatalities, near-misses.
- (2) Meetings for safety and health management.
- (3) Monitoring of safety and health management activities.
- (4) Health and safety education and training for the Contractor's Personnel.
- (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
- (6) Work environment records and other records required by JSSS Chapter 2 and other parts of JSSS.

1.30.2 All records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer.

1.30.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.29 [Safety Reports].

1.31 Health and Safety Incentive Schemes

- 1.31.1 The Contractor shall consistently enforce legitimate work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.
- 1.31.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.
- 1.31.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.
- 1.31.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.
- 1.31.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.
- 1.31.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.
- 1.31.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.
- 1.31.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.29 [*Safety Reports*].

1.32 Safety Equipment, Contractor's Equipment and Temporary Works

- 1.32.1 Contractor's Equipment and Temporary Works to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, PPE, etc.) together with all components, systems, materials and equipment shall be fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

- 1.32.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are regularly inspected by him to ensure compliance with the foregoing by qualified Contractor's Personnel or where necessary, by authorised representatives of the manufacturer. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as "safe for use".

If the HSO ascertains at any time that any items are not so certified he shall immediately stop all use of that item, stop all work for which that item and any associated items is being used and suspend all such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

1.32.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor.

If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.32.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to Annex 1.3), the Contractor shall import for sole use upon the Works (where not available in the Country):

(1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and

(2) New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old unless otherwise pre-inspected at origin by the Engineer at the Contractor's expense and pre-approved), all fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.

1.33 Health Matters

1.33.1 Further to the requirements of JSSS 1.20 [*Accident Response Plan*], the Contractor is reminded of his obligations under GC 6.7 [*Health and Safety*] (as amended by Annex 1.3), in collaboration with local health authorities to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.33.2 Where the Site of the Works is situated some distance away from urban areas and/or where there is a lack of immediate availability of suitable medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, the Contractor shall be responsible for providing additional health care services and facilities at the Site as are necessary to fully protect all Contractor's Personnel, to compensate for any lack of available services or facilities or lack of any local health authorities.

1.33.3 Additional facilities should for example include:

(1) Enhanced medical staff with qualified health care staff.

(2) Enhanced healthcare treatment facilities, equipment, medical supplies (including anti-mosquito nets in malarial prone areas), medicines and drugs.

(3) Additional treatment and recovery rooms.

1.33.4 The Specification for all Projects shall include descriptions of the particular required services and facilities to be provided by the Contractor for this purpose (refer to Annex 1.3).

1.33.5 Occupational health care shall be provided by the Contractor and shall include for example:

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) Frequent or excessive manual handling of loads, stress and fatigue.
- (4) Suitability to work checks including eyesight, hearing and physical mobility and capability.

1.33.6 The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:

- (1) Health care staff to be assigned at the Site.
- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational Healthcare proposal.
- (6) Temporary water and power supply to maintain use during mains supply failure.
- (7) Type of communication facilities and measures for emergency response.

It is to be noted that GC 6.7 [Health and Safety] (as amended by Annex 1.3), lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that are necessary to meet the high standard of health and safety management expected at the Site.

1.33.7 Medical and health services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel including their accompanying family members, all other persons (with accompanying family members) who are entitled to be on the Site and other places (if any) where the Works are being executed and at any accommodation for all such persons.

1.33.8 Unless otherwise stated in the Specification, first aid, medical and health services and facilities at the Site shall also be made available for the use of any third parties and neighbours not connected with the Works but living directly adjacent to and potentially affected by the Works.

NK/JICA please consider if above is required. See Health Matters also

1.34 Temporary Works

1.34.1 Unless otherwise stated in the Bidding Documents, Bidders are required to comply with BS5975: 2019 Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.

1.34.2 The requirement for specifying compliance with BS5975: 2019 in the Bidding Documents by a Project Executing Agency shall be determined by the extent and nature of the Works, Temporary Works and in particular the extent and nature of Falsework and Formwork design. JICA recognise that the requirement may be greater on larger or more complex Works particularly those with a high content of Formwork and Falsework containing proprietary equipment and/or traditional structural and scaffolding solutions all of which may be:

- (1) Designed to support excessively heavy loads.
- (2) Of excessive height or unusual shape.

- (3) Of difficult access.
 - (4) With unusual structural or aesthetic solution.
- 1.34.3 Other alternative internationally accepted standards are also acceptable if approved by the Engineer but only if such standards contain equivalent requirements for the management of Temporary Works in addition to the design of Falsework (including Class A Falsework).
- 1.34.4 It is to be noted that BS5975: 2019 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975:2019 and shall submit such justification to the Engineer for his information and consent.
- 1.34.5 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.
- 1.34.6 Where the Bidding Documents state that BS BS5975: 2019 is to apply, the Contractor shall appoint at least the following principal specialist staff who will be dedicated to the Temporary Works:
- (1) Temporary Works Coordinator (TWC): responsible for ensuring the preparation and implementation of effective procedures and who shall retain overall responsibility for all Temporary Works on the Site including the Temporary Works of Subcontractors. The Contractor shall not use the TWC or other personnel of Subcontractors to act as his TWC.
 - (2) Temporary Works Designer (TWD): responsible for preparing the design of all Temporary Works (including any Falsework).
 - (3) Temporary Works Supervisors (TWS): responsible for the erection, safe use, maintenance, dismantling and removal of all Temporary Works in accordance with the design and the requirements of the TWC and TWD and for providing the HSO with the following information to permit further actions:
 - (a) Confirmation that the Temporary Works have been erected in accordance with the design and that such Temporary Works and ready to accept loading; and
 - (b) Confirmation that the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works.
- 1.34.7 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed and completed in accordance with BS5975: 2019 and the Contract. All such records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer.
- 1.34.8 The TWC, TWD and TWS shall be appropriately qualified and experienced and the TWC and TWD shall be named in the Bid and hence the Contract. The TWD can be either Contractor's Personnel or personnel from an appropriately qualified and experienced specialist Subcontractor to be named in the Bid or to be subsequently consented to by the Engineer.
- 1.34.9** Procedures for the appointment and any replacement of the TWC, TWD or TWS shall be the same as described for the HSO in JSSS 1.9 [Appointment of HSO].
- 1.34.10** The Executing Agency (via their consultant) during the design stage shall consciously endeavour to remove or reduce risks in the construction of the Permanent Works as far as possible through finding solutions with less construction difficulty and risk.

1.34.11 Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and where possible shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit method statements for parts of the Temporary Works (including designs and calculations of Falsework) as may be requested by the Engineer for his review. If the Engineer choose to review same, this shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer has no obligation under the Contract to review Temporary Works design however he may choose to do so for those parts which he may consider to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975: 2019. The Engineer shall have no obligation to issue any response or comment, however if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [*Engineer's Duties and Authority*] Sub-Subclause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.

1.34.12 Where the Bidding Documents do not specifically require the Contractor to comply with BS5975: 2019, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:

- (1) Appointment of appropriately qualified and experienced staff.
- (2) Preparation of an adequate Temporary Works design.
- (3) Independent internal or external checking of the Temporary Works Design.
- (4) Preparation of a Temporary Works register and records
- (5) Pre-erection inspection of all Temporary Works, including materials, components and equipment.
- (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the temporary works, including procedures to:
 - (a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO of a formal "permit to load"; and
 - (b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO of a formal "permit to dismantle" where necessary.

The Safety Plan shall include measures to ensure that the design, erection, maintenance, dismantling and removal are all carried out by competent and experienced individuals and in a controlled and closely supervised manner.

1.34.13 Whether there is or is not any legal requirement under the Laws of the Country for academic qualification, all of the Contractor's Temporary Works specialist staff and any specialist Temporary Works Subcontractors shall have appropriate academic qualification for Temporary Works coordination, design or supervision as appropriate, work experience in construction and in Temporary Works design and whom the Contractor ascertains are qualified to perform the duties.

1.35 User Training

1.35.1 Prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.

1.35.2 The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.

1.35.3 User Training shall vary according to the scope of the Works however it shall generally cover the following:

- (1) Safe system and Plant use, operation and process control.
- (2) System and Plant maintenance and repair.
- (3) Training in use of all hardware and software packages.
- (4) Laboratory control (sampling and analysis) including operation laboratory equipment.
- (5) Recording and reporting.
- (6) Emergency operation procedure.
- (7) Maintenance management procedures.
- (8) Inventory and store control systems.
- (9) Particular safety procedures, including:
 - (a) Safe working procedure;
 - (b) Housekeeping of the facilities;
 - (c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and
 - (d) Safety measures for the Works and all items of Plant.

1.35.4 Any changes to the above with further particular details of User Training shall be provided in the Technical Specification (refer to Annex 1.3).

1.35.5 The Contractor shall also be responsible for training some candidates (as selected by the Employer) to be future trainers, so that when qualified by the Contractor, such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.

1.35.6 The Contractor shall not be responsible for paying expenses or salaries of candidates attending training.

1.35.1 User Training shall be on Site in the completed facilities, unless otherwise provided in the Technical Specification (refer to Annex 1.3).

1.35.7 The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose.

1.35.2 The Engineer may choose to send representatives to witness the training.

1.35.3 The number of Employer's staff to be trained shall be provided in the Technical Specification (refer to Annex 1.3).

- 1.35.4 All training shall be conducted in the language for communication or in English with translators provided by the Contractor.
- 1.35.5 The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and approval of the Engineer at least fifty-six (56) days before any training commences.
- 1.35.6 The training manuals and all technical literature shall be prepared in both the language for communications and also the English language.
- 1.35.7 The Contractor shall use visual media as much as possible throughout the training process.
- 1.35.8 Training shall cover both theoretical and practical operation and maintenance procedures on the Works, Plant and systems actually constructed and/or installed.
- 1.35.9 The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom are experienced in each specific aspect of the Plant and systems.
- 1.35.10 Factory User Training shall not be required unless otherwise provided in the Technical Specification (refer to Annex 1.3).
- 1.35.11 The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic and practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.
- 1.35.12 The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.
- 1.35.13 Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems.
- 1.35.14 The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Technical Specification (refer to Annex 1.3). Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise provided in the Technical Specification (refer to Annex 1.3), overall training duration shall not be less than fifty-six (56) days.
- 1.35.15 Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week-days.
- 1.35.16 Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.
- 1.35.17 The Contractor shall issue formal certificates, officially indicating that candidates are formally qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or to train future candidates as applicable.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of Chapter 1 shall have the definitions stated:

- (1) “**Executing Agency**” means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and defined in the Contract as the Employer.
- (2) “**GC**” and “**PC**” followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) “**Health and Safety Officer**” or “**HSO**” means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6.7 [*Health and Safety*] as amended by Annex 1.3 and named by the Bidder in his Bid.
- (4) “**JSSS**” or “**JICA Standard Safety Specification**” means the document of this title published officially by JICA on their website, issue number __ dated ____ and as may be modified by the Bidding Documents for the Project.
- (5) “**Method Statement**” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] as amended by Annex 1.3.
- (6) “**Operation Leader**” (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, external and internal training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations.
- (7) “**OSHA**” means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

Unless otherwise evident from the text, reference in OSHA to “team leader”, “on-site supervisor”, “on-site supervision”, “field superintendent”, “work chief” and the like shall be collectively construed as reference to “the Contractor’s Representative” and reference to the “safety and health manager of the Contractor” and the like shall be collectively construed as reference to the Contractor’s “Health and Safety Officer”. “The construction plan and safety and health plan”, shall be construed as the “Safety Plan”.

If any ambiguity or discrepancy is found in the OSHA documents specified in JSSS, or if any difference or discrepancy is found between OSHA documents and JSSS, the Engineer shall issue any necessary clarification or instruction.

- (8) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the agreement with JICA and utilising the funds provided by JICA under the terms mutually agreed for that purpose.

- (9) **“Safety Plan”** means a document that contains the overall risk assessments and shows the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in **GC 4.1 [Contractor’s General Obligations]** as amended by Annex 1.3.

“Safety” shall also mean “occupational health and safety” and “health and safety” all described as such in JSSS and other documents contained in the Contract. ~~The phrase “health and safety” shall be construed as covering “occupational health and safety”.~~

A1.1.2. The following technical words and terms in JSSS shall have the definitions stated:

- (1) **“Accident Response”** shall mean the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in **JSSS 1.20 [Accident Response Plan]**.

- (2) **“Confined Spaces”** shall mean spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.

- (3) **“Dangerous Goods”** shall mean corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.

- (4) **“Dangerous Work”** shall mean Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE.

- (5) **“Emergency Response”** shall mean the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in **JSSS 1.23 [Emergency Response Plan]**.

- (6) **“Falsework”** means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.

- (7) **“Formwork”** means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.

- (8) **“Hazardous Substances”** shall mean any substance, whether solid, liquid or gas, that may cause harm to health.

- (9) **“Hazardous Areas”** shall mean areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as Zone 0, Zone 1 or Zone 2, where:

- (a) **Zone 0:** An area in which an explosive gas atmosphere is present continuously or for long periods;

- (b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation;
- (c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.
- (10) “**Landslide**” means the movement of a mass of earth, rock or debris down a slope under the direct influence of gravity.
- (11) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Employer is continuing the operation and where the Contractor is required to perform Works.
- (12) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level. PPE for PFAS shall comprise of a body harness, an anchorage, connectors and typically shall include a lanyard, deceleration device, lifeline, or suitable combination of these. The use of a Safety Belt for fall arrest systems is prohibited. Wherever PFAS is provided for use, the Contractor shall ensure that it is used.
- (13) “**Personal Fall Restraint System**” or “**PFRS**” means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall. PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices. Wherever PFRS is provided for use, the Contractor shall ensure that it is used.
- (14) “**Safety Belt**” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard, lifeline or deceleration device. Any safety belt that has actually been subjected to a fall or previous in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for the safety of any worker.
- (15) “**Skill Training**” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.18 [Skill Training]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (16) “**Spotter**” or “**Flagman**” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, and for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, and such further duties as are assigned to them in JSSS Section 2.4 [Spotters Flagmen and the Like]. A reference to either member in JSSS shall be deemed to include a reference to the other or both.
- (17) “**User Training**” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment

PW Permanent Works

TBM Tool Box Meetings

TW Temporary Works

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ANSI American National Standards Institute.

ASTM American Society for Testing and Materials.

BS British Standard.

BS EN British Standard European Norm.

HSE UK Health and Safety Executive

ISO International Organisation for Standardisation.

ILO International Labor Organization

JIS Japanese Industrial Standards.

ODA Overseas Development Assistance

OJT On Job Training

Annex 1.2: Content of Safety Plan at Bid Stage

Further MD coordination with Annex 1.3 may be required where this is repeated

Coordination is also required in future for all other Technical Sections 2 onwards (e.g. health) where further requirements may make revision here necessary.

A1.2.1. At Bid Stage the Safety Plan shall be provided with brief indicative content as an outline Safety Plan. This must however, cover each of the subjects listed in this Annex, demonstrate that the Bidder understands the requirements and it shall contain clear and sufficient detail to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If any parts are superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Reference "Catch-all" Technical Standards

Refer to JSSS 1.4 [Laws and Reference Standards]

Confirm in the Bid Stage Safety Plan whether the standards of OSHA are to apply as the "catch-all" and if not, then the Bidder shall state the name of an equivalent internationally recognised standard for health and safety of the same or similar detail, content, coverage and international acceptance as OSHA, (such as HSE or similar), in the Bid Stage Safety Plan.

(6) Bidder's Safety Certification and Implementation Policy

NK see query in JSSS 1.5 and confirm if this certification is required as a Bid Qualification requirement (we do recommend that it is). It is optional under Annex 1.3. Clause 1.3.1

Refer to JSSS 1.5 [Contractor's Safety Certification]

Confirm which scheme the Bidder is accredited under.

Attach a valid original (or an authorised true copy) of the current certification under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation, with Form ELI -1: Bidder Information Form and ELI-2 Bidder's Party Information Form.

(7) Temporary Works (TW)

Refer to JSSS 1.34 [Temporary Works]

A Safety Plan for TW listing the principal items, describing the content, and specifying the safety measures to be applied to ensure compliance with the requirements.

Include a description of the scope of work for the principal specialist persons to be employed in the management and design of TW and the arrangements for controlling risks arising from the design, erection, maintenance, dismantling and removal of TW.

(8) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [Contractor's General Obligations] as amended by Annex 1.3, the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works ensuring that the requirements of GC 4.1 [Contractor's General Obligations] as amended by Annex 1.3, Sub-Subclauses (a) to (d) and any other requirements of the Contract are fulfilled.

(9) Safety Plan for the Permanent Works (PW)

A description of the general health and safety rules for the PW (e.g. limitation of smoking area, traveling speed on site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.) indicating measures for preventing accidents on the Site.

Particular Safety Plans for the various parts of the Works.

(10) Safety Plan for Dangerous Work

Refer to JSSS 1.19 [Dangerous Work]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS 1.2.2 [Definitions]

(11) Safety Measures for Contractor's Equipment

Refer to JSSS 1.32 [Safety Equipment, Contractor's Equipment and Temporary Works]

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(12) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.31 [Health and Safety Incentive Schemes]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety and to reward for improvement.

(13) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(14) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to **JSSS 1.32 [Safety Equipment, Contractor's Equipment and Temporary Works]**

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(15) Site Inspection Plan

A description of the methods for on-Site inspections by the HSO and frequency. The description shall also include the methods for reporting, recording and utilising results.

(16) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.

(17) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

(18) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(19) Accident Response Plan

Refer to **JSSS 1.20 [Accident Response Plan]**

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.

(20) Health Care Plan

Refer to **JSSS 1.33 [Health Matters]**

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(21) Fire Fighting Services

Refer to **JSSS 1.22 [Fire Fighting Services]**

Details of the fire fighting services to be provided at the Site.

(22) Emergency Response Plan

Refer to JSSS 1.23 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(23) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings, 5S and KYT activities (refer to JSSS 1.12 [*Contractor's Safety Management Activities*])

(24) Safety Induction Training

Refer to JSSS 1.17 [*Safety Induction Training*]

An outline description of the proposed health and safety training plans, describing methods, facilities, participants, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(25) Skill Training

Refer to JSSS 1.18 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers.

(26) User Training

Refer to JSSS 1.35 [*User Training*]

An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.

(27) Legal requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

Annex 1.3: Required Amendments to “JICA Standard Bidding Documents”

[This Annex applies to Executing Agencies (Employers and their consultants) for use in their preparation of PQ and Bidding Documents, evaluation of Bids and award of Contracts]

JICA advise that the amendments described below shall be made to the “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA), October 2012, version 1.1. (hereinafter referred to as “JSBD”).

JICA intend to re-issue the JSBD incorporating these amendments in detail at some date in the future however, in order that JSSS can be used without delay on particular Projects, for which such use of JSSS has become effective and where the parties have formally and specifically agreed to adopt JSSS for the Project, (as described in JSSS Chapter 1: Preamble Notes, **Clause B and C**), the Bidding Documents for such particular Projects shall be drafted to take account of the following amendments in advance of the re-publication of the re-issued JSBD, in accordance with the following instructions.

Amendments to JSBD Part 1: Bidding Procedures

A1.3.1 Bidders Safety Accreditation:

If a Bidder is required to be accredited in accordance with JSSS 1.5 [*Contractor’s Safety Certification*], make the following changes:

1) Part 1 – Bidding Procedures, Section I: Instructions to Bidders:

Change the numbering of existing clause from 4.6 to 4.7 and add the following new clause numbered 4.6:

A Bidder and all members constituting the Bidder, shall have the required certifications and/or accreditations (if any) specified in the BDS.

2) Part 1 – Bidding Procedures, Section II: Bid Data Sheet:

Add a new item referenced to ITB 4.6, stating as follows:

Required Accreditations: OHSAS 18001, ISO 45001: 2018 or equivalent from an internationally recognised and approved organisation.

3) Part 1 – Bidding Procedures, Section III: Evaluation and Qualification Criteria:

Modify 2.1 Eligibility to include a new item numbered 2.1.4 with the following data:

Factor: Accreditation

Requirement: Safety Accreditation required by ITB 4.6 and JSSS/BDS

Compliance Requirement: Single Entity and JV must meet the requirements.

Documentation: Forms ELI – 1 and 2, with attachments

4) Form ELI -1: Bidder Information Form and ELI-2 Bidder's Party Information Form:

Include an additional required attachment at the end of the bottom box of this form as follows:

4. Attached is an original or certified true-copy of

Safety Accreditation required by ITB 4.6 and JSSS/BDS

A1.3.2 Particular Safety Specification Requirements:

Part 1 – Bidding Procedures, Section I: Instructions to Bidders, Section VI. Works Requirements, Specification, pages WR-3 to WR-5.

Add the following additional text on page WR-5 to follow on from the existing text.

JICA Standard Safety Specification

JICA Standard Safety Specification (hereinafter referred to as JSSS) contains detailed requirements for health and safety including procedural requirements for the preparation, submission, review and response processes for Method Statements and Safety Plans for the execution of the Works.

Care shall be therefore be taken when drafting Bidding Documents for Projects where JSSS is to be used to ensure that there is no duplication of the JSSS requirements in the Technical Specification¹ for such Projects. Unnecessary and duplicated reference **must** be avoided.

JICA stress the importance of the **Employer creating a** sound working environment for the Contractor and therefore Bidding Documents should include for example: reasonable Time(s) for Completion; reasonable, continuous and unobstructed access to the Site and sufficient Site area(s), working and storage areas, all wherever possible. Requirements shall be clearly described in the Bidding Documents.

It must also be recognised that JSSS constitutes a range of standard safety requirements that shall apply **generally on JICA ODA** Projects and consequently it **will be** necessary to specify particular safety requirements for **each specific Project**. Such particular safety requirements shall be carefully and precisely drafted and included in **the relevant parts of the Bidding Documents as noted below for** such Projects and covering for example the following²:

JSSS Reference	Particular Requirements to be stated
1.7 Engineer’s Safety Representative	<p>(On large Projects with multiple contract packages and contractors) The Bidding Documents shall state if the Engineer will appoint a full-time or part-time Safety Representative as an assistant upon the Works or state if the Engineer will act in this capacity.</p> <p>If no such requirements are stated in the Bidding Documents, it is to be assumed that the Engineer’s representative at the Site shall act in this capacity.</p>
1.9 Contractor’s Health and Safety Officer at the Site	<p>(On small Projects) The Bidding Documents shall state if the HSO is NOT required to be assigned full-time on the Works.</p> <p>If not so stated in the Bidding Documents, the Contractor must assign a full-time dedicated HSO and if applicable other support personnel as required by JSSS.</p> <p>JICA advise that full-time assignment is the normal requirement and part-time or shared assignment is only allowable on very small projects with separate written justification to be provided by the Executing Agency to JICA.</p> <p>In addition to stating as above, if there is a requirement for the HSO, in Section IV. Bidding Forms, Bill of Quantities, Bill No.</p>

¹ To avoid any potential confusion with the “JICA Standard Safety Specification”, reference is made above to “Technical Specification” as this is the description used in JSBD although not in the FIDIC Conditions of Contract where this is defined as “Specification”.

² See also later **checklist Form JSSS/CPR**

JSSS Reference	Particular Requirements to be stated
	<p>1: General Items, change item 106 description to “Provide HSO and staff” with unit rate for provision being shown as “month”.</p> <p>Quantity in months shall be of the required period for provision which will usually be the Time for Completion and any required time during the Defects Notification Period.</p>
<p>1.18 Skill Training</p>	<p>The Bidding Documents shall state whether classroom-based skill training of counterpart Operation Leaders is, or is not required. The Contractor shall be expected in any event to provide OJT via his senior personnel to local counterparts.</p> <p>If it is required, the Bidding Documents shall state how many candidates shall be selected, for which skill groups and for how long.</p> <p>This shall be determined by the scope and nature of the Works but JICA suggest a usual maximum teaching period of three months for each candidate with say ten (10) candidates selected for four (4) skill groups, i.e. forty (40) candidates in total.</p> <p>Classroom lessons will be part-time, at least one (1) weekday and two (2) weekday evenings per week. Candidates shall be paid their full wages and allowances during teaching time.</p> <p>The Contractor shall design syllabi to compliment the candidates’ skill group, their work and position at the Site. In addition to skill training, syllabi shall include health and safety training to an international level of appreciation with a general introduction to OSHA and other international safety standards and regulations. The Contractor shall test candidates upon completion of their course, prepare and issue certificates of attendance and successful completion of each course.</p> <p>The Contractor shall provide classrooms which can also be a part of their office facilities at the Site and provide the use of Training Facilities (herein defined as including furniture, equipment, computers, sample tools and working equipment, other teaching aids and the like). Unless otherwise stated in the Bidding Documents, teachers shall be qualified and experienced foreign Operation Leaders assigned by the Contractor to the Works.</p> <p>In addition to stating as above and if there is a requirement for such classroom-based skill training, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items for:</p> <p>Assignment of Operation Leaders as teachers:</p> <p>Unit: man-month Quantity: Total estimated man-months</p> <p>Use of Training Facilities: Sum</p> <p>If any Training Facilities are to be handed to the Employer or issued to candidates, then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such Training Facilities shall remain the property of the Contractor and shall be removed on completion.</p>

JSSS Reference	Particular Requirements to be stated
<p>1.20 Accident Response Plan</p>	<p>The Bidding Documents shall include a listing and description of the additional services and facilities that Bidders are required to provide at the Site in addition to those already required by GC 6.7 [Health and Safety] as amended by Annex 1.3, due to the distance from urban areas, lack of immediate availability of suitable medical facilities, where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works.</p> <p>Examples of additional facilities include:</p> <ol style="list-style-type: none"> (1) Enhanced medical staff with qualified doctor(s). (2) Enhanced first aid and treatment facilities and staff. (3) Enhanced medical equipment, medical supplies, medicines and drugs. (4) Additional treatment and recovery rooms. (5) An equipped ambulance based at the Site with qualified driver and attenders on full time twenty-four (24) hour, seven (7) day per week, stand-by duty. (6) Emergency air-ambulance services. <p>In addition to stating as above, if there is a requirement for such additional facilities, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as “Sum” and unit rate/quantity for provision being shown as “month”.</p> <p>Quantity in “months” shall be of the required period for provision which will usually be the Time for Completion and any required time during the Defects Notification Period.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>
<p>1.20.8 Community Medical Support</p>	<p>The Employer, by agreement with JICA, may also wish to extend the provision of first aid, medical and health services and facilities at the Site for the use of any local community or third parties or neighbours, not connected with the Works but living directly adjacent to and potentially affected by the Works.</p> <p>If this becomes a requirement, the scope, extent and duration of such services and facilities shall be carefully described in the documents together with the responsibility (if any) and obligations of the Contractor (or Employer) to insure.</p>
<p>1.22 Fire Fighting Services</p>	<p>Without reducing the Contractor’s obligations, the Bidding Documents shall describe the particular scope of fire-fighting arrangement that are to be provided by the Contractor for the</p>

JSSS Reference	Particular Requirements to be stated
	<p>Works.</p> <p>An appropriate pay item shall be included for this in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as “Sum” and unit rate/quantity for provision being shown as “month”.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>
<p>1.23 Emergency Response Plan</p>	<p>In higher risk areas, the Employer may require the Contractor to establish, train and maintain a specialist team at the Site to assist in the event of an emergency as described in JSSS 1.23. The Bidding Documents shall specify the size of the team and shall also specify in detail the equipment to be provided so that the Contractor is made fully aware and is able to assess the extent, risk and cost of the requirements.</p> <p>An appropriate pay item shall be included for this in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as “Sum” and unit rate/quantity for provision being shown as “month”.</p>
<p>1.26 Project Safety Committee</p>	<p><i>(On large Projects with multiple contract packages and contractors)</i> The Bidding Documents shall state if a Project Safety Committee is to be established for the Project and describe any further requirements.</p>
<p>1.27 Health and Safety Coordination with Other Contractors, refer also to GC 2.3 [Employer’s Personnel]</p>	<p>(JSSS 1.27.2) The Bidding Documents shall describe the individual scope of Works for any other contractors to be employed by the Employer on the Site and where possible identify them by name. Also list any legally constituted public authorities who may be employed in the execution on or near the Site of any work not included in the Contract, and specify scope, working locations, access and timing as far as possible.</p>
<p>1.33 Health Matters</p>	<p>The Bidding Documents shall include a listing and description of the additional services and facilities that Bidders are required to provide at the Site in addition to those already required by GC 6.7 <i>[Health and Safety]</i> due to the distance from urban areas, lack of immediate availability of suitable medical facilities, where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works.</p> <p>Examples of additional facilities include:</p> <ol style="list-style-type: none"> (1) Enhanced medical staff with qualified doctor(s). (2) Enhanced first aid and treatment facilities and staff. (3) Enhanced medical equipment, medical supplies, medicines and drugs.

JSSS Reference	Particular Requirements to be stated
	<p>(4) Additional treatment and recovery rooms.</p> <p>(5) An equipped ambulance based at the Site with qualified driver and attenders on full time twenty-four (24) hour, seven (7) day per week, stand-by duty.</p> <p>(6) Emergency air-ambulance services.</p> <p>In addition to stating as above, if there is a requirement for such additional facilities, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as “Sum” and unit rate/quantity being shown as “month”.</p> <p>Quantity in “months” shall be of the required period for provision which will usually be the Time for Completion and any required time during the Defects Notification Period.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>
<p>1.34 Temporary Works</p>	<p>The Bidding Documents shall state if Bidders shall comply with BS5975: 2019 on the Works, for which purpose, reference shall be made to the basic criteria described in JSSS 1.34.</p> <p>If Bidders are required to comply with BS5975: 2019, the Bidding Documents shall include a listing and description of the required staff for the coordination, design and supervision of the Temporary.</p> <p>Examples of such staff include:</p> <ol style="list-style-type: none"> (1) Temporary Works Coordinator (TWC). (2) Temporary Works Designer (TWD). (3) Temporary Works Supervisor (TWS). <p>The Bidding Documents shall require Bidders to name TWC and TWD in the Bid for which purpose reference is to be made to this Annex 1.3.</p> <p>If Bidders are NOT required to comply with BS5975: 2019, the Bidding Documents shall state that Bidders are to comply in any event with the requirements of JSSS 1.34.12 and submit full details in the Safety Plan.</p> <p>In addition, separate written justification shall be provided by the Executing Agency to JICA.</p>
<p>1.35 User Training</p>	<p>The Bidding Documents shall state whether User Training of Employer’s Personnel is required so that the Works or any part or</p>

JSSS Reference	Particular Requirements to be stated
	<p>Section thereof can be used, operated and maintained safely.</p> <p>If it is required, the Bidding Documents shall modify or add to the requirements of JSSS 1.35 and state the precise requirements including details of required training, numbers of candidates and duration of training.</p> <p>This shall be determined by the scope and nature of the Works and the number of users, management staff, operators, maintenance staff who will be engaged upon the Works.</p> <p>Lessons will be full-time.</p> <p>The Contractor shall design syllabi to compliment the training courses and in addition to user training, syllabi shall include health and safety training to an international level of appreciation with a general introduction to OSHA and other international safety standards and regulations. The Contractor shall test candidates upon completion of their course, prepare and issue certificates of attendance and successful completion of each course.</p> <p>In addition to stating as above and if there is a requirement for such user training, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items for:</p> <p>Assignment of teachers for user training Unit: man-month Quantity: Total estimated man-months</p> <p>Provision and use of Training Facilities: Sum</p> <p>If any Training Facilities are to be handed to the Employer or issued to candidates, then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such Training Facilities shall remain the property of the Contractor and shall be removed on completion.</p>
<p>Work in Operational Areas</p>	<p>If the Works are to be executed in whole or in part in Operational Areas (as defined in Annex 1.1) this shall be stated and times of operation and conditions with any restrictions on the Contractor's working methods, times and arrangements shall be described in detail.</p> <p>The respective responsibilities for insurance, health and safety management, security, health and welfare facilities, etc., between the Employer and Contractor(s) shall be clearly described so that there is no doubt over what each party is to perform or provide. A copy of the Employer's working procedures, including their health and safety procedures shall be provided to Bidders for their study during the Bidding period.</p>
<p>Temporary Perimeter Fencing:</p>	<p>The Bidding Documents shall describe the required Perimeter fencing the showing the required extent, constructional details and specification, whether temporary or permanent and this shall also be shown on the Drawings.</p>

JSSS Reference	Particular Requirements to be stated
	<p>Permanent or temporary fencing within the Site shall be described and shown for example around hazardous areas or around operating plant areas.</p> <p>Gates barriers and other treatment at Site entrances shall be described together with any arrangements for communications, lighting and power supply.</p> <p>Requirements for security at the Site entrance and also around the site shall be described and whether this is to be provided by the Contractor or the Employer.</p>
<p>Offices, Accommodation and Related Amenities and Facilities</p>	<p>The Bidding Documents shall describe the required Employer’s, Engineer’s and Contractor’s construction offices, staff accommodation and related amenities and facilities to be provided by the Contractor and describe the responsibility for the maintenance and repair of same. The Bidding Documents show the required scope, design, constructional details and specification, whether temporary or permanent and this shall also be shown on the Drawings.</p> <p>The Contractor’s responsibility for potable water supply, water and power supply, waste water and sewage drainage and treatment shall be clearly described and shown.</p> <p>The extent of provision by the Contractor shall take due account of the nature and location of the Site and the condition of access thereto.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>

To assist with compliance of the above requirements, a checklist has been prepared and is attached to this **Annex I.3**

A1.3.3 Required Detail of Bid Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Safety Plan, page BF-33.

Delete “[Insert Safety Plan]” and in this place insert the following:

Copy and paste here the exact same final text of JSSS Annex 1.2 as ultimately agreed.

A1.3.4 Bid Evaluation Requirements for Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section III. Evaluation and Qualification Criteria, 1, Evaluation, 1.1 Evaluation of Technical Bids.

(Applies to both Section III. Evaluation and Qualification Criteria (Following Prequalification) and Section III. Evaluation and Qualification Criteria (Without Prequalification), Pages EQC-1)

In the paragraph stating [Evaluation of the Bidder’s Technical Proposal will include an assessment of the Bidder’s technical capacity to mobilise key equipment and personnel for the

Contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI, Works Requirements.] *insert “and Safety Plan” in the third line after the words, “work methods”.*

Insert the following additional paragraph after the above paragraph:

“Evaluation of the Safety Plan shall take account of the Health and Safety Officer, and if compliance with BS5795: 2019 is a specified requirement of the Bidding Documents (refer to **JSSS Annex 1.3**) of any principal Temporary Works coordination, design and supervision staff, in item 1.1.2 Personnel and of PPE and any other safety equipment from the Safety Plan in item 1.1.3 Equipment.”

A1.3.5 **Health and Safety Officer and (if applicable) Temporary Works staff:**

Part 1 – Bidding Procedures, Section I. Instructions to Bidders Section III. Evaluation and Qualification Criteria against 1.1.2 Personnel.

Delete position 2 as stated and insert as follows:

2 Health and Safety Officer at the Site

Delete position 3 and the words “e.g. Health and Safety (Accident Prevention Officer) and insert the following:

*(if any of the following are a specified requirement of the Bidding Documents by reference to **JSSS Annex 1.3**):*

3. Temporary Works Coordinator

4. Temporary Works Designer

5. Temporary Works Supervisor

On the following line insert the words:

Other personnel to be inserted as appropriate.

Under “Notes for Employer” delete notes 1 and 2 and in this place insert the words:

The proposal for all required personnel shall be evaluated.

A1.3.6 **Bidder’s Safety Declaration (Form JSSS/BSD):**

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms

*Include “**Form JSSS/BSD** – Bidder’s Safety Declaration” in the Bidding Documents after the existing Form-ACK, with new page BF-56; renumber existing pages BF-56 and BF-57 appropriately and insert suitable reference in the Table of Forms on page BF-1.*

*The Employer requires **all Bidders** to appoint the Health and Safety Officer at the Site (HSO) prior to Bid submission and this HSO shall sign **Form JSSS/BSD** in addition to the Bidder’s Official Representative.*

*Please refer to end of this JSSS Annex1.3 for a **copy of Form JSSS/BSD***

Amendments to JSBD Part 3 - Particular Conditions of Contract

The following GC Sub-Clauses are to be modified as stated and as a consequence, future reference to these numbered Sub-Clauses, shall be to PC rather than GC.

A1.3.7 **Submission and Review of Method Statements and Safety Plans:**

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause	GC 4.1	<i>Delete that part of the fifth paragraph of this Sub-</i>
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Contractor's General Obligations	<p><i>Clause which states:</i></p> <p>The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.”</p> <p><i>and in this place insert:</i></p> <p>(a) The Contractor shall, whenever required by the Engineer, submit Method Statements and/or Safety Plans each with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works or any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the request.</p> <p>(b) The Engineer may review the Method Statements and/or Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Method Statement and /or Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.</p> <p>If the Engineer gives no such notice of non-compliance for the original Method Statement and/or Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted Method Statement and/or Safety Plan within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement and/or Safety Plan subject to complying with his other obligations under the Contract.</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(d) The Contractor shall submit a revised Method Statement and/or Safety Plan whenever required by the Engineer or when any previous Method Statement and/or Safety Plan for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site in accordance with the requirements described in items (a) to (c) above.</p>
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	<p><i>DCI: NK, the above relates to any part of the Works and are effectively “Particular Safety Plans” which actually will not be required so often (or even at all) IF the Safety Plan at Commencement (see PC 4.8) is prepared properly.</i></p> <p><i>Can we please discuss</i></p>
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A1.3.8 JSSS Comprised as Part of the Contract with Further Safety Requirements:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause GC 4.8 Contractor’s Health and Safety Obligations</p>	<p><i>Delete this Sub-Clause completely and replace with the following:</i></p> <p>The Contractor shall:</p> <ul style="list-style-type: none"> (a) Comply with all applicable health and safety Laws of the Country, all standards and regulations, (b) Comply with all applicable health and safety obligations specified in the Contract including those contained in the JICA Standard Safety Specification (JSSS) and which as an entire document is to be read and construed as an integral part of the Contract by virtue of this Contract Sub-Clause amendment; (c) Comply with all directions issued by the Contractor's Health and Safety Officer (appointed under Sub-Clause 6. 7 [<i>Health and Safety</i>] as amended by this JSSS Annex 1.3; (d) Take care of the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed; (e) Keep the Site, the Works (and the other places (if any) where the Works are being executed) clear of unnecessary obstruction so as to avoid danger to these persons; (f) Provide fencing, lighting, safe access, guarding and watching of: <ul style="list-style-type: none"> (i) the Works, until the Works are taken over under Clause 10 [<i>Employer's Taking Over</i>]; and (ii) any part of the Works where the Contractor is executing outstanding works or remedying any defects during the Defects Notification Period; and (g) Provide any Temporary Works (including roadways, footways, guards and fences) that
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	<p>may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land and property.</p> <p>Within twenty-eight (twenty-eight (28) days of the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site, the Contractor shall submit to the Engineer for information an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>This shall be based upon the Safety Plan issued at bid stage, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan to demonstrate the Contractor's intended compliance with the Contract.</p> <p>This document shall be in addition to any other similar document required under applicable health and safety Laws of the Country.</p> <p>This Safety Plan shall set out or refer to all the health and safety requirements:</p> <ul style="list-style-type: none">(a) that are stated in JSSS;(b) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and(c) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Works are being executed. <p>Requirements for submission by Contractor and response (if any) by the Engineer, shall be in accordance with GC 4.1 [Contractor's General Obligations] as amended by Annex 1.3.</p> <p>The Safety plan shall be revised as necessary by the Contractor or the HSO or at the reasonable request of the Engineer and each revision shall be submitted promptly to the Engineer for his information.</p> <p>In addition to the safety reporting requirements of sub paragraph (g) of Sub-Clause 4.21 [Progress Reports] the Contractor shall inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.</p> <p>The Contractor shall, comply with the health and safety</p>
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	<p>recording and reporting requirements of JSSS.</p> <p>The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p> <p>Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.</p>
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A1.3.9 Change “accident prevention officer” to “Health and Safety Officer”:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause GC 6.7 Health and Safety	<i>In the second paragraph, delete the words “accident prevention officer at the Site” and insert “Health and Safety Officer at the Site”</i>
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A1.3.10 Revised Order of Priority of Documents

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause GC 1.5 Priority of Documents	<p><i>Delete sub-items (a) to (i) and insert the following sub-items (a) to (j):</i></p> <ul style="list-style-type: none"> (a) the Contract Agreement (if any), (b) the Letter of Acceptance, (c) the Letter of Tender, (d) the Particular Conditions - Part A, (e) the Particular Conditions - Part B, (f) these General Conditions, (g) the JICA Standard Safety Specification (JSSS) and the signed Bidder’s Declaration, (h) the Specification, (i) the Drawings, and (j) the Schedules and any other documents forming part of the Contract.
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Included to avoid the discrepancy that exists with the Contract Agreement where this is also referred to (see below).

A1.3.11 Raised Awareness of Available Resources on ODA Projects

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause GC 6.9 Contractor’s	<i>Add the following paragraphs to the end of the existing Sub-Clause:</i>
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Personnel	<p>The Contractor shall be deemed to be aware that in many countries and locations for which Overseas Development Assistance (ODA) is provided, the qualified, skilled and experienced Contractor's Personnel required by this Sub-Clause is frequently not available or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, quality and performance that is demanded for these ODA Projects.</p> <p>The Contractor shall therefore be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries and all of whom shall be appropriately qualified, skilled and experienced to the standards required and sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.</p> <p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Contract.</p> <p>Without limiting the Contractor's obligations under the first two above added paragraphs of this Sub-Clause, the Contractor shall also employ counterpart local Contractor's Personnel with whom the Contractor shall implement a policy of mutual cooperation and ensure that this is adopted by all other Contractor's Personnel who shall work closely with and transfer necessary knowledge and skills to the counterpart staff to raise skill levels and awareness of international standards.</p> <p>The Contractor shall provide further skill training including classroom courses for all local personnel to compliment the direct on-job-training.</p> <p>The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic qualification, with copies provided to the Engineer if so requested by the Engineer.</p> <p>Details of such training shall be submitted with the Bid Safety Plan.</p> <p>Any such employment, training and academic qualification and employment of local personnel shall not mean that the Contractor can demobilise the imported resources unless the Contractor and Engineer are satisfied that the remaining Contractor's Personnel are able to act fully in accordance with the requirements of the Contract.</p>
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A1.3.12 Assignment of Foreign Personnel on ODA Projects

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause GC 6.12 Foreign Personnel</p>	<p><i>Insert the following additional paragraph after the first paragraph of Sub-Clause 6.12:</i></p> <p>Such foreign personnel shall be qualified, skilled and experienced Personnel of Operation Leader status or above.</p> <p>Unless otherwise stated in the Bidding Documents, the Contractor shall not bring into the Country any unqualified, unskilled or inexperienced foreign Contractor's Personnel.</p>
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A1.3.13 Listing of Documents to be included in the Contract Agreement:

Part 3 – Conditions of Contract and Contract Forms, Section IX. Annex to the Particular Conditions - Contract Forms

<p><i>[Option A: One-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p><i>In paragraph 2. delete sub-items (i) to (ix) and insert the following sub-items (i) to (x):</i></p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Bid; (iii) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (iv) the Particular Conditions; (v) the General Conditions; (vi) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (vii) the Specification; (viii) the Drawings; (ix) the completed Schedules; and (x) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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and:

<p><i>[Option B: Two-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p><i>In paragraph 2. delete sub-items (i) to (x) and insert the following sub-items (i) to (xi):</i></p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Technical Bid; (iii) the Letter of Price Bid; (iv) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any);
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	<ul style="list-style-type: none">(v) the Particular Conditions;(vi) the General Conditions;(vii) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration;(viii) the Specification;(ix) the Drawings;(x) the completed Schedules; and(xi) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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Form JSSS/CPR - Checklist of Particular Requirements in Bidding Documents

[This form is to be prepared by the Executing Agency after completing the preparation of the PQ and Bidding Documents and submitted to JICA local office together with the Draft PQ and Bidding Documents when the concurrence of JICA is being requested for these documents]

JSSS Reference	Requirement:	Yes ✓	No ✓	If not default, explain why:	Default and Notes
1.5 Bidder's Safety Accreditation	<i>Required or not.</i>				Default is "Yes",
	<i>Documents fully amended</i>				Default is "Yes".
1.7 Engineer's Safety Representative	<i>Required to be assigned or not.</i>				Default is "No", not required except on large projects.
1.9 Contractor's Health and Safety Officer at the Site	<i>Required to be assigned full-time or not</i>				Default is "Yes", normally required to be full time
1.20 Accident Response Plan	<i>Additional facilities required at Site or not</i>				Default is "Yes", full detail shall be provided in Technical Specification" (unless local facilities are readily available)
1.20.8 Community Medical Support	<i>Required or not</i>				Default is "No", unless agreed earlier with JICA
1.22 Fire Fighting Services	<i>Additional facilities required at Site or not</i>				Default is "Yes", full detail shall be provided in Technical Specification" (unless local facilities are readily available)
1.23 Emergency Response Plan	<i>Full details of additional rescue facilities provided</i>				Default is "No", unless higher risk area
1.26 Project Safety Committee	<i>Required or not.</i>				Default is "No", not required except on large projects.
1.27 Health and Safety Coordination with Other Contractors, refer also to GC 2.3 [Employer's Personnel]	<i>Full details provided by Employer</i>				Default is "Yes". Full detail shall be provided in Technical Specification

JSSS Reference	Requirement:	Yes ✓	No ✓	If not default, explain why:	Default and Notes
1.33 Health Matters	<i>Additional facilities required at Site or not</i>				Default is “Yes”, full detail shall be provided in Technical Specification” (unless local facilities are readily available)
1.34 Temporary Works	<i>Compliance with BS 5975:2019 required or not</i>				Default is “Yes”.
1.35 User Training	<i>Full details provided by Employer</i>				Default is “Yes”. Full detail shall be provided in Technical Specification
Work in Operational Areas	<i>Operational Areas exist on the Site?</i>				No default
	<i>If Operational Areas exist on the Site full detail provided?</i>				If applicable, default is “Yes”.
Temporary Perimeter Fencing:	<i>Full details provided by Employer</i>				Default is “Yes”. Full detail shall be provided in Technical Specification
Offices, Accommodation and Related Amenities and Facilities	<i>Full details provided by Employer</i>				Default is “Yes”. Full detail shall be provided in Technical Specification
A1.3.3 Required detail of Safety Plans	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.4 Bid Evaluation Requirements for Safety Plan	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.5 Health and Safety Officer and (if applicable)	<i>Bidding Documents amended to</i>				Default is “Yes”.

JSSS Reference	Requirement:	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	If not default, explain why:	Default and Notes
Temporary Works staff	<i>show the full requirements?</i>				
A1.3.6 Bidder's Safety Declaration (Form JSSS/BSD)	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.7 Submission and Review of Method Statements and Safety Plans	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.8 JSSS Comprised as Part of the Contract with Further Safety Requirements	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.9 Change "accident prevention officer" to "Health and Safety Officer"	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.10 Revised Order of Priority of Documents	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.11 Raised Awareness of Available Resources on ODA Projects	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.12 Assignment of Foreign Personnel on ODA Projects	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".
A1.3.13 Listing of Documents to be included in the Contract Agreement	<i>Bidding Documents amended to show the full requirements?</i>				Default is "Yes".

Name of Project:

Loan Number:

Package Number

Package Description

Signed:

Signed:

(Executing Agency: Official Representative)

(Consultant: Authorised Representative)

Signatory Name:

Signatory Name:

Date: _____

Date: _____

Address:

Address:

Form JSSS/BSD - Bidder's Safety Declaration

[Refer to earlier Annex 1.3 item 1.3.6: This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page BF-56; renumbering existing pages BF-56 and BF-57 appropriately and inserting suitable reference in the Table of Forms on page BF-1]

I, *[insert name and position of authorised signatory]*, being duly authorized by *[insert name of Bidder/members of joint venture (“JV”)]* (hereinafter referred to as the “Bidder”) to execute this Form JSSS/BSD hereby declare our commitment to comply with the requirements of the JICA Standard Safety Specification (JSSS).

The Bidder declares, that if selected to undertake the Works in connection with the Contract, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Employer's Personnel and the Contractor's Personnel and any other persons entitled to be thereon or that may be affected by operations thereby and that the Bidder is aware and accepts to follow all of the relevant health and safety Laws of the Country and the requirements of JSSS.

Irrespective of the Laws of the Country and the enforcement or otherwise of same, the Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, Personal Protective Equipment, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder declares that he will import for sole use upon the Works (where not available in the Country):

1. New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old unless otherwise pre-inspected at origin by the Engineer at the Contractor's expense and pre-approved), all fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, academic qualification, experience and capability;
3. Fully inform workers about hazards;
4. Provide health and safety training to all Contractor's Personnel and Employer's Personnel in a language and vocabulary they can understand;
5. Keep accurate records of work-related injuries and illnesses;
6. Perform tests in the workplace, such as air sampling as required by JSSS;
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned;

9. Provide eyesight, hearing and mobility examinations and other medical tests required by JSSS;
10. Post injury and illness information and data where workers can see them;
11. Inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately; and
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if he is successful with his Bid, the Health & Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If our Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site)

Name:

Date: _____

Annex 1.4: Form JSSS/SAR - Sample Accident Report

[This form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.21. The Engineer shall forward a copy to the JICA local office for JICA information and record.]

Name of Project:	Loan Number:
Package Number:	Package Description:
Contractor: (name and address)	Employer: (name and address)
Engineer: (name and address)	JICA Local Office Address:
Accident Report Submission Date and Number:	Issue Number:
FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location:	
4) Brief background and apparent cause:	
5) Number of casualties:	
6) Description of injuries incurred:	
7) Date, time and location of treatment:	
8) Present medical status of casualties:	
9) Present location of casualties:	
10) Present work status:	
SUBSEQUENT REPORT INFORMATION (POST-INVESTIGATION):	
1) Cause(s) of the accident:	
2) Longer term treatment of casualties:	

3) Assistance provided to casualties and their dependents:	
4) Settlement damages/expenses paid to casualties:	
5) Claims agreed and settled	
6) Covered by Contractor's insurance:	
7) Counter-measures to avoid recurrence of similar accidents and risks:	
8) Lessons learned from the accident:	
9) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
10) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
11) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
12) Other Information:	

<p>Report Prepared by:</p> <p>(name): _____</p> <p>(sign) : _____</p> <p>Report Submission Date(s) _____</p> <p>Time: _____</p>	<p>Contractor's Health and Safety Officer (HSO)</p>
<p>Receipt acknowledged by:</p> <p>(name): _____</p> <p>(sign): _____</p> <p>Report Receipt Date(s) _____</p> <p>Time: _____</p>	<p>Engineer</p>

Annex 1.5: Subjects of Skill Training Course for Counterpart Operation Leaders

Under FIDIC GC 6.9, “The Contractor’s Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations.”

This is a basic requirement and it is not incumbent upon the Employer to accept otherwise or to pay further for skill training of the Contractor’s Personnel to achieve this standard.

*However please refer to **JSSS 1.18** [Skill Training] which we have added to provide OJT and also classroom-based skill training for local counterpart Operation Leaders. The idea is that skill knowledge will be passed on by them in future.*

We suggest that Skill Training shall be according to the scope of Works in the Project with the emphasis on direct OJT if necessary from foreign Operation Leaders.

This could/should be complimented by some classroom training, testing and even perhaps certifying in some way by the contractor.

However, the syllabus so far prepared is far too complicated and will be difficult to understand and apply.

Please can this be simplified.

Consideration must also be given to payment for this and it is necessary to include a simple payment mechanism in the Bidding Documents for such training otherwise it will not happen.

Please refer to Annex 1.3, where I have included some suggestions.

Annex 1.xxx: Dangerous or Harmful Operations

Recommend that this is not used

Dangerous Work has now been specifically defined (See Annex 1.1 definitions) and in a much wider sense and we recommend that this Annex 1.xxx is now not applicable and not necessary; it has little or no meaning.

Annex 1.xxx: Subjects of Special Education for Dangerous or Harmful Operations

Awaiting further information from NK

This is not recommended; the contractor is responsible for determining what is dangerous or not, not JICA and he is then responsible for whatever methods, education, choice of equipment etc. etc. to make certain that workers are able to work safely in such “dangerous” or “harmful operations”.

It is possible that if JICA state what education is required and if the contractor then chooses to employ an unqualified workforce but educates then as requested by JSSS and there is then an accident, JSSS/JICA could be adjudged in some way responsible.

We understood that this is not the intention of JSSS.

*When Contractor’s Personnel are engaged in any operations including potentially dangerous or harmful operations ALL personnel shall be selected by the contractor as qualified and experienced and given all necessary health, safety **and skill** training by the Contractor appropriate to the operations concerned. There is no advantage on giving examples to a contractor who should already know what is required, is responsible, is being paid for this and has insured for the consequences.*

Annex 1.xxx: Work Requiring the Assignment of an Operation Leader

Please refer to JSSS 1.19 and Annex 1 definition of Operation leaders.

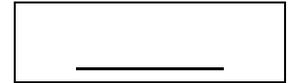
This Annex 1.xxx is not necessary, not recommended and potentiality creates a liability for JICA.

What if it excludes some work and there is an accident?

NO worker should be left to work on his own, ALL should be trained, skilled and guided and properly supervised.

Also, Operation Leaders are not by definition one type of skilled person, there are many different kinds each so qualified according to his skill group and trade.

Changes since previous issue
Coordination



JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA



***Japan International Cooperation Agency
(JICA)***

_____, 2020

Prepared: DCI for NK
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ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources and expresses its gratitude to such other sources and publications which include:

1) *Japanese Acts, Orders and Ordinances including:*

Industrial Safety and Health Act

Order for Enforcement of Industrial Safety and Health Act

Ordinance on Industrial Safety and Health

Safety Ordinance for Cranes

Ordinance on Safety and Health of Work under High Pressure

Ordinance on Prevention of Anoxia, etc.

Ordinance on Prevention of Hazards Due to Dust

Explosives Control Act

Order for Enforcement of Explosives Control Act

Ordinance on Explosives Control

2) *“OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A..*

3) *Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.*

4) *Conditions of Contract for Construction For Building And Engineering Works Designed By The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)*

DISCLAIMER

JICA has prepared and issued this document in good faith for the reference of executing agencies, contractors and project teams engaged under the Japanese ODA programme, to encourage the attainment of a higher standard of health and safety management on its construction projects. JICA, together with the Executing Agencies of its ODA Projects shall not accept or assume any liability or responsibility for any events or the consequences thereof deriving from the use of this document. The document is provided without any express or implied warranty, including without limitation, warranties of accuracy, completeness, fitness for purpose, in general or on particular Projects and non-infringement. This document is intended to provide general reference and shall not be relied upon as a specific legal source or reference or used in any way as a basis of any claim by a contractor against any employer or vice versa under any contract for the execution of any Works.

JICA STANDARD SAFETY SPECIFICATION (JSSS)

Indicative Only

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16. Dam Works	16.1	<i>(Excluded - to be included in JSSS Second Edition)</i>
17. Demolition and Alteration Works	17.1	<i>(Excluded - to be included in JSSS Second Edition)</i>
18. Others	18.1	Flash-Floods/Landslides: <i>(excluded - to be included in JSSS Second Edition)</i> <i>Note this is partly added in Chapter 1 see JSSS 1.23 Emergency Response Plan</i>

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

PREAMBLE NOTES

A. Purpose and Objective:

The Japan International Cooperation Agency (hereinafter referred to as “JICA”) require that all parties engaged upon their ODA Projects shall endeavour to establish and maintain a culture ensuring human security and the maintenance of human rights as an essential and fundamental feature. The common objective shall be the achievement of a zero-accident rate, adopting the slogan of “Safety First” by creating a working environment where health and safety are of the highest priority.

To assist with this objective, JICA have prepared and published this Standard Safety Specification (hereinafter referred to as “JSSS”) and which JICA aim to be adopted for future selected Projects by the Executing Agencies for such Projects.

JSSS is one component of the JICA overall strategy to successfully achieve “**Quality Infrastructure**” under its assistance and development programmes. JICA are committed to pursuing the highest achievable levels of quality, safety, environmental protection, harmony and efficiency in performance, “**Ensuring Human Security**” whilst ensuring that “**Appropriate Cost Sharing**” is achieved.

B. Effectiveness

JSSS has been published on-line by JICA and it shall become effective and be incorporated by Project executing agencies in the Bidding Documents (and therefore the Contracts) for particular Projects on the date that the ODA agreement for that Project is executed and where the parties to such ODA Agreement have formally and specifically agreed to adopt JSSS as the technical basis for Health and Safety management on that Project.

It is not intended to include or attach a hard copy of JSSS to Bidding Documents or the Contract for respective Projects but a copy of JSSS shall be available on JICA’s web site shown below:

http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/_____

C. Incorporation of JSSS into Contracts

Where the parties to an ODA Agreement have formally and specifically agreed to adopt JSSS for a new Project, the Bidding Documents shall be amended to state this, in accordance with Annex 1.3 and Bids will be requested on this basis.

The Contract Agreement for the newly awarded Project shall include JSSS as a “further document” within the context of GC 1.1.1 [*The Contract*] and a hard copy of JSSS (current as at the Base Date of the Contract) shall be prepared and included with the documents comprised in the Contract for the Project.

Unless otherwise specifically agreed by JICA and the executing agency, JSSS shall not be applied to any on-going JICA funded Projects as at the date of publication of JSSS.

Where JSSS is already in use on any Project, by further agreement between JICA and the executing agency of any such on-going Project, future issues/revisions of JSSS may be applied after the date that such future issues/revisions are published on line subject to issue by the Engineer of an appropriate Variation under GC 13.1 [*Right to Vary*].

It is requested that the Employer, Engineer and Contractor will each print separate hard copies of the Contract issue of JSSS for their own reference and all of these entities shall fully inform their personnel, Subcontractor’s, sub-consultants and all other parties who are associated with the particular Project of the existence, content and purpose of JSSS and the objectives thereof.

It is the intention of JICA to formally update their separate “Standard Bidding Documents under Japanese ODA Loans” with instructions for the amendment of Bidding Documents to incorporate JSSS, however in the meantime relevant changes shall be made in accordance with Annex 1.3.

JSSS shall thereafter become an integral part of the Bidding Documents for particular Projects and requirements can be implemented immediately after the Executing Agency has made the required modification to the Bidding Documents, and thereafter JSSS shall be read and construed as a part of the Bid and therefore the Contract for that Project.

D. Compliance and General Obligations

JSSS shall not limit the Contractor’s statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

The Contractor shall ensure that all health and safety hazards and risks are properly identified, evaluated and controlled prior to commencement of any work. Only suitably qualified, fit and competent persons shall manage the health and safety activities.

Compliance with the JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract and shall not impose or imply any role or responsibility upon the Employer or the Employer’s Personnel for health and safety or management of the Works all of which is to be performed by the Contractor under the Contract for the Project.

Where the Laws of the Country so state, the Health and Safety Officer (as defined herein) shall be qualified and legally registered as such in accordance with such Laws.

Similarly, JSSS shall not limit the Contractor to the scope contained herein.

These Preamble Notes and all Annexes to this Chapter 1: General Requirements shall be read and construed as integral parts of JSSS and therefore shall be deemed to constitute integral parts of the Contract for the Project.

JICA STANDARD SAFETY SPECIFICATION (JSSS)

CHAPTER 1: GENERAL REQUIREMENTS

JICA REQUIREMENTS

1.1 Employer's Safety Declaration

By entering into a Contract, the Employer (together with the Engineer acting as his consultant) declares that he shall collaborate in good faith with the Contractor and take all reasonable measures within his authority and under his control to promote the highest achievable health and safety standards in the execution of the Works all in accordance with his contractual and statutory responsibilities and adopting the slogan:

“SAFETY FIRST”

The Contractor shall aim to achieve “Zero-Accident” in the execution of the Works by taking full responsibility for the health and safety management of the Works and adopting JSSS that specifies the minimum safety requirements that the Contractor shall implement.

A Bidder's Safety Declaration shall be submitted with the Bid, declaring the Bidder's commitments and obligations, in accordance with Annex 1.3.

1.2 Definitions, Abbreviations and Standards

1.2.1 For Definitions, abbreviations and standards contained throughout JSSS, refer to Annex 1.1.

1.2.2 The following further requirements relate generally to the use of the definitions contained in the Contract and in Annex 1.1:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (3) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (4) Any reference to academic qualification of Contractor's Personnel within this document and unless otherwise stated, shall mean a currently valid academic qualification demonstrated by a certified true diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an equivalent diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.
- (5) Any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor's Personnel shall also be deemed to include the provision by the Contractor of the same such **health and** safety measures for Employer's Personnel and any other persons that are entitled to be on the Site and other places (if any) where the Works are being executed.
- (6) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

1.3 Application to Grant Aid and other Projects

- 1.3.1 JSSS has been drafted to apply to JICA ODA Loan Projects and to the relevant FIDIC harmonised form of Contract for such Projects as referred to JSSS 1.2 [*Definitions, Abbreviations and Standards*] item (6).
- 1.3.2 JSSS shall apply equally to other JICA assisted Projects that have been awarded under different forms of contract including those under Contractor design contracts and contracts under the JICA Grant Aid programme. When so used, suitable modification shall be required to the definitions and text of JSSS and the Bidding Documents for those Projects to ensure compatibility and consistency with the relevant contract requirements for the Project, reflecting the same intentions, standards and procedures for improving health and safety.

1.4 JSSS - Laws and Reference Standards

The Contractor shall comply as a minimum with the Laws of the Country, including all health and safety standards.

- 1.4.2 If the Employer has formally agreed with JICA to adopt JSSS for the Project, then the requirements of JSSS shall apply and prevail where the particular standards of JSSS are considered by the Engineer to be higher than the technical requirements of the Laws of the Country without limiting the Contractor's legal duties and obligations under such Laws.
- 1.4.3 Otherwise where the Laws of the Country (including any health and safety standards) are silent on particular health and safety requirements and where provisions are included in JSSS then JSSS shall apply and prevail.
- 1.4.4 JSSS is an abbreviated document and where specifically stated it requires specific compliance with the specified technical requirements of OSHA. As a general rule, where JSSS contains insufficient or no technical regulations or no detailed technical requirements then the related detailed technical regulations of OSHA as a "catch-all" or at least equivalent shall apply.

"At least equivalent" in this context shall mean the standards of an internationally recognised health and safety organisation or authority of the same or similar detail, content, coverage and international acceptance as OSHA, (such as HSE or similar), as proposed by the Bidder in the Bid Stage Safety Plan.

This shall be evaluated by the Employer and agreed between the Parties prior to execution of the Contract Agreement. If in the opinion of the Employer, the standard proposed by the Bidder is not equivalent to OSHA, HSE or similar, then the Employer will choose to apply OSHA as the "catch-all".

Any subsequent requirements for particular reference standards shall be as proposed by the Contractor and given consent by the Engineer on the same basis.

- 1.4.5 JSSS prescribes minimum requirements and the parties are free to include higher standards when so agreed between Contractor, Employer and Engineer.
- 1.4.6 The Contractor shall be deemed to have studied and familiarised himself with the Laws of the Country and to have ascertained if any part of such Laws is superior to any of the particular requirements of OSHA, in which case such particular Laws shall apply and the Contractor shall inform the Engineer accordingly.
- 1.4.7 The reference standards used in JSSS can be substituted with alternative standards after requesting and obtaining the consent of the Engineer who may give such consent only if in his opinion such alternative standards provide an equivalent or higher standard of health and safety than that required by JSSS.
- 1.4.8 Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

- 1.4.9 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation, the requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.

1.5 Contractor's Safety Certification

- 1.5.1 Unless otherwise expressly stated in the Bidding Documents (refer to Annex 1.3), the Contractor shall be formally accredited for complying with the Occupational Health and Safety requirements of OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally accredited organisation as determined by the Employer (if to be determined at Bid Evaluation stage) or Engineer (during the Project implementation stage). The Contractor shall possess a current and valid certification at all times.
- 1.5.2 If accreditation is required by the Bidding Documents, an original or authorised true copy of the current certification shall be submitted as an attachment to Form ELI -1: Bidder Information Form and ELI-2 Bidder's Party Information Form and this shall subsequently be included with the Contract.
- 1.5.3 The Contractor shall submit original or authorised true copies of subsequent annual renewals to the Engineer when same are due.

1.6 Contractor's Safety Plan

- 1.6.1 The Contractor shall be required to submit the Safety Plan principally at two stages:
- (1) With the Bid submission.
 - (2) Within twenty-eight (28) days of the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site, refer to GC 4.1 [*Contractor's General Obligations*], as amended by Annex 1.3.
- 1.6.2 The Safety Plan is intended to provide an accurate and comprehensive indication of what will be provided or performed by the Contractor to ensure that health and safety management is maintained at a high level throughout the Time for Completion of the Works. The Contractor shall update and revise the Safety Plan at any stage to reflect actual requirements.
- 1.6.3 Submission of any Safety Plan and inclusion in the Bid or Contract or following any submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility and at any time throughout the Time for Completion of the Works.
- 1.6.4 For details of the Safety Plan at Bid stage, refer to Annex 1.2 [*Detail of Safety Plans in Bidding Documents*].
- 1.6.5 For details of the Safety Plan at commencement stage, refer to Annex 1.3, Clause 1.3.7 and GC 4.8. [*Contractor's Health and Safety Obligations*] as amended by Annex 1.3.
- 1.6.6 Further revision of Safety Plans

The Safety Plan (or parts of it) shall be revised or supplemented to suit changing circumstances or conditions at the Site or where considered necessary by the HSO or when required by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*], as amended by Annex 1.3.

The Safety Plan (if necessary supplemented with later particular safety plans) shall ensure that the Engineer, is made aware in writing of at least the following information for all parts of the Works, in any event not less than twenty-one (21) days before commencing any parts of the Works:

- (1) Work outline, work procedure and order of carrying out the work;
- (2) Number of Contractor's Personnel;

- (3) Safety management system and responsibility and authority of Contractor's Personnel;
 - (4) Risk assessments;
 - (5) Safety measures;
 - (6) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE);
 - (7) Safety education and training of the Contractor's Personnel and TBM;
 - (8) Teaching materials used in education, training and pre-operation TBM before work;
 - (9) Method of information sharing and communication among the Contractor's Personnel;
 - (10) Implementation and monitoring of measures for health and safety management;
 - (11) Reference technical safety standards;
 - (12) Temporary Works;
 - (13) Accident Response Plan;
 - (14) Health Care Plan;
 - (15) Firefighting Services; and
 - (16) Emergency Response Plan.
- 1.6.7 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.
- 1.6.8 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.
- 1.6.9 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed of all hazards and risks on the Site.
- 1.6.10 The procedural flow of risk assessment shall be as follows.
- (1) Identifying hazards.
 - (2) Evaluating risks.
 - (3) Determining measures of risk reduction.
- 1.6.11 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:
- (1) Removal of hazards such as eliminating dangerous works.
 - (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
 - (3) Engineering measures.
 - (4) Management measures – enhanced training and skills.
 - (5) Use of PPE.

1.7 Engineer's Safety Representative

- 1.7.1 On larger Projects with multiple contract packages and contractors, and if so stated in the Bidding Documents for those Projects, the Engineer may appoint an assistant under GC 3.2 [*Delegation by the Engineer*] to be known as the Engineer's Safety Representative (ESR) and who shall be responsible for health and safety within the Engineer's organisation on Site and for monitoring the Contractor's compliance with each contractor's Safety Plan.

In such case and by written notice served under GC 3.2 [Delegation by the Engineer], the Engineer shall delegate authority to the Engineer's Safety Representative to represent the Engineer in matters of health and safety at Site, to issue written instructions to the Contractor on matters of health and safety and monitor compliance with such instructions which shall include:

- (1) Instructions requiring the Contractor's compliance with the Safety Plan.
- (2) Emergency instructions to Contractor to stop working where the Engineer observes accidents, near misses or unhealthy or unsafe conditions.
- (3) Instructions requiring the Contractor to change the working methods at the Site to improve health and safety.

1.7.2 The Engineer's Safety Representative shall cooperate and work closely with the HSO and will represent the Engineer on Joint Site Safety Inspections and also undertake independent and regular inspections of the Works at the Site.

1.7.3 The Engineer's Safety Representative shall give safety compliance instructions to the Contractor in accordance with his/her delegated authority under GC 3.3 [*Instructions of the Engineer*].

1.7.4 The Contractor shall take corrective action within the time limit prescribed in the instruction, shall keep the Engineer's Safety Representative fully informed on progress and shall report in writing when the corrective action is completed.

1.7.5 If the Bidding Documents state that the appointment of a full-time or part-time Engineer's Safety Representative is not required (refer to Annex 1.3), it is to be assumed that the Engineer's representative at the Site shall act in this capacity.

1.8 Safety Compliance Instructions from the Engineer

1.8.1 Without affecting or diminishing the Contractor's responsibility under GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3, to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.

If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [*Suspension of Work*] until the Contractor has taken corrective and preventive measures to ensure that no further risk exists.

If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated and proposed to the Engineer and implemented at the Site, to ensure that no such accident can reoccur.

1.8.2 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.9 Contractor's Health and Safety Officer at the Site.

1.9.1 Requirements for the HSO:

- (1) The Bidder shall name the HSO in the Bid and thence the same person shall be named in the Contract. The Contractor shall assign the named HSO upon the Site of the Works, on or before the Commencement Date.

- (2) If the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [*Contractor's Personnel*] as amended by Annex 1.3, or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable replacement person to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor and not of a Subcontractor and unless otherwise stated in the Contract, the HSO shall be assigned full time upon the Works and his/her responsibilities, authority and duties shall be in accordance with GC 6.7 [*Health and Safety*] as amended by Annex 1.3.
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate academic qualification for such position if required by the Laws of the Country and also (if so required) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall be fluent in the language for communications stated in the Contract as defined in GC 1.4 [*Law and Language*]. The HSO shall preferably also be fluent in the ruling language of the Contract (if different) however it is acceptable for the HSO to use a translator for this language only.
- (7) Where there is no legal requirement under the Laws of the Country for academic qualification, the HSO, shall have appropriate academic qualification for health and safety, work experience in construction (minimum ten (10) years) and in health and safety management (minimum five (5) years which can be concurrent with construction experience) and two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country) and whom the Contractor considers is qualified to perform the duties subject to receiving the consent of the Engineer.
- (8) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his/her duties.
- (9) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO including additional managers, assistants and inspectors all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.
- (10) The HSO (where necessary with the assistance of his qualified support staff) shall personally be capable to ensure that:
 - (a) All working areas of the Site are inspected on a regular basis (at least once every working day) to detect if any unsafe practices, works or conditions exist; and
 - (b) If such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken.

Any site inspections attended by the HSO, may also include the attendance of the Engineer or his safety representative.

1.10 HSO - Scope of Duties

1.10.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.10.2 The particular scope of duties of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Work:
 - (a) Preparation of Safety Plans, implementation, evaluation, improvement, revision and submission thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan;
 - (d) Temporarily stopping or suspending the Works or any part of the Works following any accident or where the HSO discovers any unsafe conditions, unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan;
 - (e) Temporarily stopping or suspending the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.8;
 - (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
 - (g) Preparing proposal, reporting and consulting with the Engineer including when an accident occurs or any risk or hazardous situation is likely;
 - (h) Appointment of health and safety inspectors and assistants after obtaining the consent of the Engineer; and
 - (i) Consultation on safety management with the Employer's Personnel.
- (2) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents.
- (3) Assistance with selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability.
- (4) Planning and implementation of various training and education implementation plans.
- (5) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases.
- (6) Preparing regular internal and external reports on health and safety activities.
- (7) Hazard prediction activity.

1.11 Procedure for Resuming the Works

If the Engineer has issued an instruction under JSSS 1.8 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped or suspended the Works or any part of the Works in accordance with JSSS 1.10 [*HSO – Scope of Duties*] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and cannot reoccur.
- (2) The Contractor shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.

- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within fourteen (14) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving seven (7) days' notice in writing of the resumption date.
- (5) The Contractor resumes the Works or part of the Works on the resumption date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.12 Contractor's Safety Management Activities

1.12.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.12.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

- (1) Overall Safety Management Activities:
 - (a) Arranging, chairing, attending meetings as described above and other internal contractor meetings including TBM;
 - (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and
 - (c) Monitoring the implementation of the Safety Plan.
- (2) Safety Management of Contractor's Personnel:
 - (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, toolbox meetings, providing general advice and instruction, specific instructions on individual works, safety confirmations, information to be conveyed etc.
 - (b) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as:

5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline.

KIKEN YOCHI TRAINING (KYT) for hazard prediction training usually in TBM, where: K = kiken (hazard), Y = yochi (prediction) and T = training.
 - (c) Instruction and management of safety education and training.
 - (d) Instruction and management of all safety measures.
 - (e) Joint Site Safety Inspections

1.13 Joint Site Safety Inspections

1.13.1 In addition to the Contractor's own daily Site Safety Inspections, the Contractor shall conduct regular Joint Site Safety Inspections with the Engineer or (if appointed) the safety representative of the Engineer. Respective safety staff may also attend.

- 1.13.2 Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.13.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.13.4 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.14 Compliance Monitoring and Auditing

- 1.14.1 The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured and that such compliance is monitored efficiently and transparently at all times, for which purpose the Contractor shall:
- (1) Create checklists for monitoring.
 - (2) Carry out regular and irregular inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions.
 - (4) Create files and safe storage systems for the monitoring records.
 - (5) Copy all relevant information to the Engineer as requested by the Engineer.
- 1.14.2 Safety inspections, are intended to search for risks and hazards, which present a threat to safe working.
- 1.14.3 The Contractor shall also carry out regular health and safety audits, to ascertain of the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:
- (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
 - (2) Are the Safety Plan requirements being met?
 - (3) Is there documented proof of compliance?
 - (4) Is health and safety training effective?
 - (5) Is the Contractor's health and safety management system working effectively?
- 1.14.4 The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the Works.
- 1.14.5 The audit team shall be headed by the Contractor's Representative and at least two other members of the Contractor's Personnel, preferably including an Operation Leader. The HSO may attend but only in an advisory capacity and team members shall not be required or allowed to audit their own work.
- 1.14.6 The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.
- 1.14.7 The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems; they shall not replace the regular health and safety inspections.
- 1.14.8 The audits shall be conducted on a random basis at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.
- 1.14.9 The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor.

- 1.14.10 A single prearranged annual audit is not recommended as it will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.
- 1.14.11 An audit report shall be prepared by the Contractor's Representative detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.
- 1.14.12 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.15 Proper Placement of Contractor's Personnel

- 1.15.1 To varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided. Only appropriate personnel shall be assigned, suitable and capable for the work tasks for which they are selected in terms of academic qualification, skill, experience and also in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct, workwear, tools and equipment, PPE and Safety equipment etc.
- 1.15.2 Construction labourers and manual workers shall never be assigned on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader of an appropriate grade to ensure that safe working practices are constantly applied.
- 1.15.3 The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.
- 1.15.4 The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.
- 1.15.5 The HSO shall countersign all such records to indicate his confirmation of the suitability of each member of the Contractor's Personnel prior to their placement. These records shall be made available for inspection by the Engineer.
- 1.15.6 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:
- (1) Work content and work environment.
 - (2) Work experience, academic qualification and capability.
 - (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
 - (4) Allocation of an achievable and safe work volume and time.
 - (5) Allocation to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].
- 1.15.7 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic qualification, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel comply with such requirements

1.15.8 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic qualification, experience and skills.

1.15.9 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that he resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site unless otherwise approved by the Engineer and assigning a suitable replacement.

1.16 Safety Training Generally

1.16.1 The Contractor shall conduct health and safety education and training for all of the Contractor's Personnel.

1.16.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.

1.16.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid and the Contractor shall bear all necessary Cost and expenses.

1.17 Safety Induction Training

1.17.1 Safety induction training shall be provided by the Contractor for all Contractor's Personnel upon the Site when they commence work on Site and also when they are scheduled to change work type, skill or location. The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting any work.
- (5) Dangerous Works; General rules, locations, precautions and general working requirements. (Refer to separate requirements for special training).
- (6) PPE and other safety devices; use, handling and care.
- (7) Maintaining all areas of the Site in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment.
- (9) Firefighting; Actions, precautions and control.
- (10) Health and safety rules.
- (11) Causes and prevention of diseases that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

- 1.17.2 Practical on-Site demonstrations shall be included in every case and wherever possible.
- 1.17.3 The Contractor shall provide safety induction training to the Employer's Personnel and to any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed at the request of the Employer or Engineer.
- 1.17.4 Training Personnel
- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
 - (2) All trainers shall be fluent in the language of the Country.
 - (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic qualification, ability and experience, subject to receiving the advance consent of the Engineer.
- 1.17.5 Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.18 Skill Training

- 1.18.1 The Contractor is reminded of his obligations under GC 6.9 [*Contractor's Personnel*] as amended by Annex 1.3) which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.
- 1.18.2 The Employer requires the Contractor where possible to employ local workers, in particular potential counterpart Operation Leaders for each trade and skill group and operation and in the spirit of cooperation, the Contractor is requested to train and to transfer skills to such persons largely through OJT with the assignment of foreign Contractor's Personnel as required by GC 6.9 as amended by Annex 1.3.
- 1.18.3 In addition, and to compliment this OJT, the Employer requires the Contractor to provide classroom-based training courses and to assign qualified instructors to provide basic skill training to develop the ability of local counterpart Operation Leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots. Examples of the scope of this skill training are included in Annex 1.5xxx. The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for information. For further details refer also to Annex 1.3.
- 1.18.4 It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall automatically be locally employed and trained for the purpose, this remains as the Contractor's choice in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel (including foreign personnel if necessary) who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.

1.18.5 Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [*Contractor's Personnel*] as amended by Annex 1.3.

1.19 Dangerous Work

1.19.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.19.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training pursuant to the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.19.3 The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official "permit to enter", to be worn conspicuously and be available for validation by the Engineer.

1.19.4 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.

1.19.5 The Contractor shall select, train and equip specialist rescue teams at the Site, who can be called upon immediately in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment.

1.19.6 Rescue equipment shall include respiratory protective equipment for rescue operations, safety extraction belts/harnesses/ropes measures.

1.19.7 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those instructed to do so in order to prevent secondary accident.

1.19.8 The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.

1.19.9 Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.

1.19.10 For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [*Prohibition of Entry – Dangerous Work*].

1.19.11 Hazardous Substances.

(1) If there is a possibility that any Hazardous Substances exist at the Site of the Works or in any existing buildings and structures, then unless otherwise stated in the Bidding Documents, this shall be surveyed and investigated by the Employer before bidding. The results of this investigation shall be clearly stated and full information including survey and investigation results with requirements for removal and disposal shall be provided by the Employer in the Bidding Documents. This shall be confirmed by the Employer through inserting suitable reference on Form JSSS/CPR - Checklist of Particular Requirements in Bidding Documents, as referred to in JSSS Annex 1.3 Required Amendments to "JICA Standard Bidding Documents".

(2) If the Contractor during the execution of the Works, encounters and is required by the Bidding Documents or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialist Subcontractor(s) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.

- (3) The Contractor shall obtain the Engineer's consent for such specialist Subcontractors and their detailed Method Statements and Safety Plan shall also be submitted to the Engineer in accordance GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3.

1.20 Accident Response Plan

- 1.20.1 The Contractor is reminded of his obligations under GC 6.7 [*Health and Safety*] (as amended by Annex 1.3), in collaboration with local health authorities, to provide the following services and facilities and to make them available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel:
- (1) Medical staff.
 - (2) First aid facilities.
 - (3) Sick bay.
 - (4) Ambulance service.
- 1.20.2 Where the Site of the Works is situated some distance away from urban areas and/or where there is a lack of immediate availability of suitable medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor's Personnel, to compensate for any lack of available services or facilities or lack of any local health authorities.
- 1.20.3 Such distant locations shall generally be defined as locations where the transfer time by road from the Site to a hospital with a suitably equipped and medically attended accident and emergency department, exceeds thirty (30) minutes, then the Contractor shall be responsible for providing such additional services and facilities at the Site to ensure that appropriate action can be taken within a maximum fifteen (15) minutes period. Additional facilities should for example include:
- (1) Enhanced medical staff with qualified doctor(s).
 - (2) Enhanced first aid and treatment facilities and staff.
 - (3) Enhanced medical equipment, medical supplies, medicines and drugs.
 - (4) Additional treatment and recovery rooms.
 - (5) An equipped ambulance based at the Site with qualified driver and attenders on full time twenty-four (24) hour, seven (7) day per week, stand-by duty.

- 1.20.4 Where the transfer time by road can exceed one (1) hour, emergency air-ambulance facility shall also be considered in addition to the above.
- 1.20.5 The Specification for all Projects shall include descriptions of the particular required services and facilities to be provided by the Contractor for this purpose (refer to Annex 1.3 [Required Amendments to “JICA Standard Bidding Documents”]).
- 1.20.6 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue services and treatment using experienced and qualified medical staff and fully equipped facilities at the Site.
- 1.20.7 Medical and health services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor’s Personnel, the Employer’s Personnel including their accompanying family members, all other persons (with accompanying family members) who are entitled to be on the Site and other places (if any) where the Works are being executed and at any accommodation for all such persons.
- 1.20.8 Unless otherwise stated in the Specification, first aid, medical and health services and facilities at the Site shall also be made available for the use of any local community, or third parties or neighbours not connected with the Works but living directly adjacent to and potentially affected by the Works.
- 1.20.9 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:
- (1) Medical staff to be assigned at the Site.
 - (2) Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.
 - (3) Medical Facilities on the Site together with description of equipment and consumables.
 - (4) Temporary water and power supply to maintain use during mains supply failure.
 - (5) Type of communication facilities and measures for emergency response.
 - (6) Deployment of appropriate first aid appliances, aids, instruments and medicines.
 - (7) First aid training, appointment of first aiders and dissemination of information.

It is to be noted that GC 6.7 [Health and Safety] as amended by Annex 1.3, lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that are necessary to meet the high standard of health and safety management and provision expected at the Site.

It is also to be noted that Medical staff and facilities to be assigned at the Site, in addition to treatment for accidents are also required to provide welfare and hygiene requirements and assist with the prevention of epidemics. This shall also be adequately described in the Safety Plan.

1.21 Measures at the Time Accidents Occur

- 1.21.1 When an accident occurs, the Contractor shall immediately discontinue the work task and take all efforts to:
- (1) Safely locate and extract casualties.
 - (2) Provide first aid treatment at the Site.
 - (3) Provide other Accident Response measures
 - (4) Implement Secondary accident prevention activities, including:
 - (a) Preserving the accident site, make safe and prevent anyone interfering or entering;

- (b) Discontinuing construction work related to or in the vicinity of the accident; and
- (c) Implementing any further measures instructed by the Engineer.

1.21.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident or illness in accordance with GC 4.8 [*Contractor's Health and Safety Obligations*] as amended by Annex 1.3.
- (2) Having investigated and established the cause of any accident or illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures to prevent any reoccurrence and shall be in the format indicated in Annex 1.4.

1.21.3 For resumption of work procedures, refer to JSSS 1.11.

1.22 Fire Prevention

1.22.1 The Contractor is reminded of his obligations under GC 17.2.7 [*Care of the Works*].

1.22.2 Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor's Personnel and Employer's Personnel, to compensate for any such lack of available public services or facilities.

1.22.3 Such distant locations shall generally be defined as locations where the road journey time by fire engine from an equipped and attended public fire station to the Site exceeds thirty (30) minutes, then the Contractor shall be responsible for providing such additional services and facilities at the Site to ensure that appropriate action can be taken within a maximum fifteen (15) minute period. Such additional facilities may include:

- (1) An equipped fire engine based at the Site with qualified driver and crew on a full time twenty-four (24) hour, seven (7) day per week, stand-by duty.
- (2) Sufficient temporary water and power supply to maintain emergency use.
- (3) Enhanced fire protection equipment and facilities around the Site.

- 1.22.4 The Contractor shall ensure that persons are kept safely away from any fire and where practicable and safe, to limit the spread of fire.
- 1.22.5 The Contractor shall select, train and equip specialist emergency fire-fighting teams at the Site, who shall be called upon immediately in the event of any fire, to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated by fire and to provide suitable, specialist and appropriate first aid and medical treatment.
- 1.22.6 The Specification for all Projects shall include descriptions of the particular required services and facilities to be provided by the Contractor for this purpose (refer to Annex 1.3).
- 1.22.7 For further information on this topic refer to **JSSS Section 2.8 [Fire Prevention]**.

1.23 Emergency Response Plan

1.23.1 The Contractor shall keep fully himself informed at all times of likely forecasted climatic and seismic conditions (if and to the extent reasonably possible) from TV, radio and internet and as far as reasonably possible, shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other climatic conditions and can be reasonably anticipated. The Contractor shall take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by such climatic conditions, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have reasonably avoided or overcome or lessened the effects.

1.23.2 The Contractor shall keep all areas of the Site, all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, free from surface water and ground water at all times and by whatever means are necessary to ensure:

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent Landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.23.3 Where there is a risk of earthquake or volcanic activity at the Site, the Contractor shall take measures to prevent damage including damage from Landslides and consequent injury, damage and flooding arising from such earthquake or volcanic activity.

Such measures to be implemented (where applicable to the extent that advance notice and warnings permit) shall include:

- (1) Designing (or avoiding the use of) permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially cause Landslides with consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed and to any third parties and neighbours and property not connected with the Works but potentially affected thereby.
- (2) Provision of temporary support to all sides and soffits of excavations or tunnelling of sufficient strength, durability and suitability.

- (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.23.4 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3.

1.23.5 Unless otherwise stated in the Specification for the Project, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

This “plan” shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any (remaining) facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. This “plan” does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions given under the Contract.

1.23.6 The Emergency Response Plan, shall cover:

- (1) Evacuation plan, **showing evacuation routes and assembly points.**
- (2) **Emergency communication and contact facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that it can be utilised in any emergency.**
- (3) Use of existing and available medical and other related facilities.
- (4) Assisting with search and recovery.

The Emergency Response Plan shall be submitted as part of the Safety Plan and be updated as necessary throughout the Time for Completion of the Works.

1.23.7 The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.23.8 If required by the Specification, (refer to Annex 1.3), the Contractor shall set up an emergency search team (or teams) and train and equip same so that they are able to search, locate, extract and transfer any potential casualties to medical treatment facilities at the Site (if available) or otherwise assist as far as possible with removal to other available medical treatment facilities.

1.23.9 If required by the Specification, (refer to Annex 1.3), the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months and including:

- (1) Training of the search and recovery team.
- (2) Training of the Site medical team to deal with likely trauma.
- (3) Training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.23.10 If and when an emergency occurs during the Time for Completion, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.23.11 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit and as instructed by the Engineer.

1.23.12 For further measures and requirements refer to JSSS 2.7 [Emergency Response Plan – Additional Requirements]

1.24 Contractor's Safety Committee and Regular Safety Meetings

1.24.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.24.2 Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of Contractor's Personnel including workers on Site.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.24.3 The HSO shall be the chairman of the Safety Committee.

1.24.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:

- (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
- (b) Monthly or weekly schedule of important health and safety matters;
- (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence;
- (d) Hazards, safety and health problems resulting from:
 - (i) Site inspections by HSO;
 - (ii) Issues raised by the representative of Contractor's Personnel;
 - (iii) Issues raised by Subcontractors; and
 - (iv) Issues raised by others.
- (e) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (f) Safety instructions received from the Engineer;
- (g) Items to be coordinated with police, fire department and other related organisations;
- (h) Compliance and registration requirements under the Laws of the Country;
- (i) Safety and health awards, media attention and the like; and
- (j) Other matters.

1.24.5 Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.25 Engineer's Regular Safety Meetings

1.25.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to make commitments on health and safety matters on behalf of the organisations that they represent:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence;
 - (d) Hazards, safety and health problems resulting from:
 - (i) Inspections by the Engineer and the Employer.
 - (ii) Site inspections by HSO.
 - (iii) Issues raised by the representative of the Contractor's Personnel.
 - (iv) Issues raised by Subcontractors.
 - (v) Issues raised by others.

- (e) Status of resolution of previous problems;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country;
- (h) Safety and health awards, media attention and the like; and
- (i) Other matters.

1.25.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer with a further copy provided directly to the local office of JICA within the Country.

1.26 Project Safety Committee

1.26.1 On larger Projects with multiple contract packages and contractors and if so stated in the Bidding Documents for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.26.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.26.3 The Chairman of the Safety Committee shall be the Employer.

1.26.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.

1.26.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

1.27 Health and Safety Coordination with Other Contractors

1.27.1 Refer to GC 2.3 [*Employer's Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer, and
- (3) the personnel of any legally constituted public authorities,

who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to (1) and (2) above, the Employer shall ensure that such personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] as amended by Annex 1.3 and GC 4.18 [*Protection of the Environment*].

In relation to (3) above the Contractor shall ensure that such personnel are fully informed of the Contractor's Safety Plan and shall liaise and agree with such authorities to ensure that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Contractor is therefore required to contact such other contractors directly and liaise with them to obtain all such other information and incorporate this into the Safety Plan.

When risks arise because of potential interactions between the Contractor and other contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Contractor shall take a positive role in ensuring the general principles of risk prevention and control are applied amongst all contractors involved.

1.27.2 The Bidding Documents shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.27.3 If the above circumstances apply, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;
 - (c) Accidents, injuries and measures to prevent any reoccurrence;
 - (d) Status of resolution of previous problems;
 - (e) Items to be coordinated with police, fire department and other related organisations;
 - (f) Compliance and registration requirements under the Laws of the Country;
 - (g) Safety and health awards, media attention and the like; and
 - (h) Other matters.

1.27.4 Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the Engineer's monthly progress report.

1.28 Safety Statistics

1.28.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.28.2 Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, casualties, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes of them.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff, contents, frequency, participant, duration of safety education at site and safety event.
- (9) Others.

1.28.3 All data shall be in a format and content format and content to be approved by the Engineer.

1.28.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.28.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.29 [*Safety Reports*].

1.29 Safety Reports

1.29.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, improvement.
- (2) Joint Site Safety Inspections.
- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [*Progress Reports*].

1.30 Health and Safety Records

1.30.1 The Contractor shall keep health and safety records for the following:

- (1) Accidents, fatalities, near-misses.
- (2) Meetings for safety and health management.
- (3) Monitoring of safety and health management activities.
- (4) Health and safety education and training for the Contractor's Personnel.

- (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
 - (6) Work environment records and other records required by JSSS Chapter 2 and other parts of JSSS.
- 1.30.2 All records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer.
- 1.30.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.29 [*Safety Reports*].

1.31 Health and Safety Incentive Schemes

- 1.31.1 The Contractor shall consistently enforce legitimate work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.
- 1.31.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.
- 1.31.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.
- 1.31.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.
- 1.31.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.
- 1.31.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.
- 1.31.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.
- 1.31.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.29 [*Safety Reports*].

1.32 Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment (PPE)

- 1.32.1 Contractor's Equipment and Temporary Works to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, **safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works)**, shall be fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

1.32.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are regularly inspected by him to ensure compliance with the foregoing by qualified Contractor's Personnel or where necessary, by authorised representatives of the manufacturer. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as "safe for use".

If the HSO ascertains at any time that any items are not so certified he shall immediately stop all use of that item, stop all work for which that item and any associated items is being used and suspend all such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

1.32.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor.

If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.32.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to Annex 1.3), the Contractor shall import for sole use upon the Works (where not available in the Country):

- (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
- (2) New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old unless otherwise pre-inspected at origin by the Engineer at the Contractor's expense and pre-approved), all fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.

1.33 Health Matters

- 1.33.1 Further to the requirements of JSSS 1.20 [*Accident Response Plan*], the Contractor is reminded of his obligations under GC 6.7 [*Health and Safety*] (as amended by Annex 1.3), in collaboration with local health authorities to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.
- 1.33.2 Where the Site of the Works is situated some distance away from urban areas and/or where there is a lack of immediate availability of suitable medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, the Contractor shall be responsible for providing additional health care services and facilities at the Site as are necessary to fully protect all Contractor's Personnel, to compensate for any lack of available services or facilities or lack of any local health authorities.
- 1.33.3 Additional facilities should for example include:
- (1) Enhanced medical staff with qualified health care staff.
 - (2) Enhanced healthcare treatment facilities, equipment, medical supplies (including anti-mosquito nets in malarial prone areas), medicines and drugs.
 - (3) Additional treatment and recovery rooms.
- 1.33.4 The Specification for all Projects shall include descriptions of the particular required services and facilities to be provided by the Contractor for this purpose (refer to Annex 1.3).
- 1.33.5 Occupational health care shall be provided by the Contractor and shall include for example:
- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [*Working Environment*]).
 - (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
 - (3) Frequent or excessive manual handling of loads, stress and fatigue.
 - (4) Suitability to work checks including eyesight, hearing and physical mobility and capability.
- 1.33.6 The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:
- (1) Health care staff to be assigned at the Site.
 - (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
 - (3) Healthcare services to be provided including lectures and education on health matters.
 - (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
 - (5) Occupational Healthcare proposal.
 - (6) Temporary water and power supply to maintain use during mains supply failure.
 - (7) Type of communication facilities and measures for emergency response.

It is to be noted that GC 6.7 [*Health and Safety*] (as amended by Annex 1.3), lists minimum facilities and measures and the Contractor shall provide such additional facilities and measures that are necessary to meet the high standard of health and safety management expected at the Site.

- 1.33.7 Medical and health services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel including their accompanying family members, all other persons (with accompanying family members) who are entitled to be on the Site and other places (if any) where the Works are being executed and at any accommodation for all such persons.
- 1.33.8 Unless otherwise stated in the Specification, first aid, medical and health services and facilities at the Site shall also be made available for the use of any third parties and neighbours not connected with the Works but living directly adjacent to and potentially affected by the Works.

1.34 Temporary Works

- 1.34.1 Unless otherwise stated in the Bidding Documents, Bidders are required to comply with BS5975: 2019 Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.
- 1.34.2 The requirement for specifying compliance with BS5975: 2019 in the Bidding Documents by a Project Executing Agency shall be determined by the extent and nature of the Works, Temporary Works and in particular the extent and nature of Falsework and Formwork design. JICA recognise that the requirement may be greater on larger or more complex Works particularly those with a high content of Formwork and Falsework containing proprietary equipment and/or traditional structural and scaffolding solutions all of which may be:
- (1) Designed to support excessively heavy loads.
 - (2) Of excessive height or unusual shape.
 - (3) Of difficult access.
 - (4) With unusual structural or aesthetic solution.
- 1.34.3 Other alternative internationally accepted standards are also acceptable if approved by the Engineer but only if such standards contain equivalent requirements for the management of Temporary Works in addition to the design of Falsework (including Class A Falsework).
- 1.34.4 It is to be noted that BS5975: 2019 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975:2019 and shall submit such justification to the Engineer for his information and consent.
- 1.34.5 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.
- 1.34.6 Where the Bidding Documents state that BS BS5975: 2019 is to apply, the Contractor shall appoint at least the following principal specialist staff who will be dedicated to the Temporary Works:
- (1) Temporary Works Coordinator (TWC): responsible for ensuring the preparation and implementation of effective procedures and who shall retain overall responsibility for all Temporary Works on the Site including the Temporary Works of Subcontractors. The Contractor shall not use the TWC or other personnel of Subcontractors to act as his TWC.
 - (2) Temporary Works Designer (TWD): responsible for preparing the design of all Temporary Works (including any Falsework).
 - (3) Temporary Works Supervisors (TWS): responsible for the erection, safe use, maintenance, dismantling and removal of all Temporary Works in accordance with the

design and the requirements of the TWC and TWD and for providing the HSO with the following information to permit further actions:

- (a) Confirmation that the Temporary Works have been erected in accordance with the design and that such Temporary Works are ready to accept loading; and
- (b) Confirmation that the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works.

1.34.7 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed and completed in accordance with BS5975: 2019 and the Contract. All such records shall be in a format and content to be approved by the Engineer and all shall be made available for inspection by the Engineer.

1.34.8 The TWC, TWD and TWS shall be appropriately qualified and experienced and the TWC and TWD shall be named in the Bid and hence the Contract. The TWD can be either Contractor's Personnel or personnel from an appropriately qualified and experienced specialist Subcontractor to be named in the Bid or to be subsequently consented to by the Engineer.

1.34.9 Procedures for the appointment and any replacement of the TWC, TWD or TWS shall be the same as described for the HSO in JSSS 1.9 [*Appointment of HSO*].

1.34.10 The Executing Agency (via their consultant) during the design stage shall consciously endeavour to remove or reduce risks in the construction of the Permanent Works as far as possible through finding solutions with less construction difficulty and risk.

1.34.11 Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and where possible shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit method statements for parts of the Temporary Works (including designs and calculations of Falsework) as may be requested by the Engineer for his review. If the Engineer choose to review same, this shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer has no obligation under the Contract to review Temporary Works design however he may choose to do so for those parts which he may consider to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975: 2019. The Engineer shall have no obligation to issue any response or comment, however if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [*Engineer's Duties and Authority*] Sub-Subclause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.

1.34.12 Where the Bidding Documents do not specifically require the Contractor to comply with BS5975: 2019, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:

- (1) Appointment of appropriately qualified and experienced staff.
- (2) Preparation of an adequate Temporary Works design.
- (3) Independent internal or external checking of the Temporary Works Design.
- (4) Preparation of a Temporary Works register and records

- (5) Pre-erection inspection of all Temporary Works, including materials, components and equipment.
- (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the temporary works, including procedures to:
 - (a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO of a formal “permit to load”; and
 - (b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO of a formal “permit to dismantle” where necessary.

The Safety Plan shall include measures to ensure that the design, erection, maintenance, dismantling and removal are all carried out by competent and experienced individuals and in a controlled and closely supervised manner.

1.34.13 Whether there is or is not any legal requirement under the Laws of the Country for academic qualification, all of the Contractor’s Temporary Works specialist staff and any specialist Temporary Works Subcontractors shall have appropriate academic qualification for Temporary Works coordination, design or supervision as appropriate, work experience in construction and in Temporary Works design and whom the Contractor ascertains are qualified to perform the duties.

1.35 User Training

1.35.1 Prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer’s Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.

1.35.2 The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.

1.35.3 User Training shall vary according to the scope of the Works however it shall generally cover the following:

- (1) Safe system and Plant use, operation and process control.
- (2) System and Plant maintenance and repair.
- (3) Training in use of all hardware and software packages.
- (4) Laboratory control (sampling and analysis) including operation laboratory equipment.
- (5) Recording and reporting.
- (6) Emergency operation procedure.
- (7) Maintenance management procedures.
- (8) Inventory and store control systems.
- (9) Particular safety procedures, including:
 - (a) Safe working procedure;
 - (b) Housekeeping of the facilities;
 - (c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and
 - (d) Safety measures for the Works and all items of Plant.

- 1.35.4 Any changes to the above with further particular details of User Training shall be provided in the Technical Specification (refer to Annex 1.3).
- 1.35.5 The Contractor shall also be responsible for training some candidates (as selected by the Employer) to be future trainers, so that when qualified by the Contractor, such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.
- 1.35.6 The Contractor shall not be responsible for paying expenses or salaries of candidates attending training.
- 1.35.7 User Training shall be on Site in the completed facilities, unless otherwise provided in the Technical Specification (refer to Annex 1.3).
- 1.35.8 The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose.
- 1.35.9 The Engineer may choose to send representatives to witness the training.
- 1.35.10 The number of Employer's staff to be trained shall be provided in the Technical Specification (refer to Annex 1.3).
- 1.35.11 All training shall be conducted in the language for communication or in English with translators provided by the Contractor.
- 1.35.12 The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and approval of the Engineer at least fifty-six (56) days before any training commences.
- 1.35.13 The training manuals and all technical literature shall be prepared in both the language for communications and also the English language.
- 1.35.14 The Contractor shall use visual media as much as possible throughout the training process.
- 1.35.15 Training shall cover both theoretical and practical operation and maintenance procedures on the Works, Plant and systems actually constructed and/or installed.
- 1.35.16 The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom are experienced in each specific aspect of the Plant and systems.

- 1.35.17 Factory User Training shall not be required unless otherwise provided in the Technical Specification (refer to Annex 1.3).
- 1.35.18 The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic and practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.
- 1.35.19 The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.
- 1.35.20 Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems.
- 1.35.21 The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Technical Specification (refer to Annex 1.3). Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise provided in the Technical Specification (refer to Annex 1.3), overall training duration shall not be less than fifty-six (56) days.
- 1.35.22 Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week-days.
- 1.35.23 Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.
- 1.35.24 The Contractor shall issue formal certificates, officially indicating that candidates are formally qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or to train future candidates as applicable.

1.36 Unexploded Ordnance (UXO)

- 1.36.1. If there is a possibility that any UXO exists at the Site of the Works or in any existing buildings and structures, then unless otherwise stated in the Bidding Documents, this shall be surveyed and investigated by the Employer before bidding. The results of this investigation shall be clearly stated and full information including survey and investigation results with requirements for removal and disposal shall be provided by the Employer in the Bidding Documents. This shall be confirmed by the Employer through inserting suitable reference on Form JSSS/CPR - Checklist of Particular Requirements in Bidding Documents, as referred to in JSSS Annex 1.3 Required Amendments to "JICA Standard Bidding Documents".
- 1.36.2. JICA prefer that clearance of UXO shall be undertaken by the Employer as a precedent condition to commencement under GCC 8.1 [*Commencement of Works*], at the cost of the Employer and carried out by specialist government organisations, forces or contractor(s) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of UXO, engaged directly by the Employer.
- 1.36.3. Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence at the Site until the receipt of a copy of this certificate.
- 1.36.4. If this method is to be adopted then it shall be clearly stated in the Bidding Documents (refer to JSSS Annex 1.3), and the procedures shall be described.

- 1.36.5. As an exception and only following the prior agreement of JICA, clearance of UXO shall be carried out by the Contractor under the Contract. If this method is to be adopted, the Employer shall give reasons for this to JICA using Form JSSS/CPR - Checklist of Particular Requirements in Bidding Documents, as referred to in JSSS Annex 1.3 Required Amendments to “JICA Standard Bidding Documents”.
- 1.36.6. The Bidding Documents shall then require the Contractor to employ suitable specialist Subcontractor(s) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of UXO. The specialist Subcontractor shall carry out a detailed survey and investigation and then safely execute any removal and disposal of UXO before commencing any Works at the Site. In addition, the Bidding Documents should require the Contractor to ensure that his own insurance of the Works, covers for this likelihood.
- 1.36.7. Completion of clearance shall be evidenced through the issue by the Contractor’s specialist Subcontractor of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no other work shall commence at the Site until the receipt by the Engineer of a copy of this certificate.
- 1.36.8. Irrespective of the selected method, should the Contractor encounter UXO he shall immediately suspend his operations at Site, clear the area of all Contractor’s Personnel, Employer’s Personnel and all other persons and notify the Engineer and relevant authorities. Work shall resume when the Contractor has received instructions from the Engineer and relevant authorities.
- 1.36.9. The Contractor shall obtain the Engineer’s consent for such specialist Subcontractors and their detailed Method Statements and Safety Plan shall also be submitted to the Engineer in accordance GC 4.1 [*Contractor’s General Obligations*] as amended by Annex 1.3.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of Chapter 1 shall have the definitions stated:

- (1) “**Executing Agency**” means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and defined in the Contract as the Employer.
- (2) “**GC**” and “**PC**” followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) “**Health and Safety Officer**” or “**HSO**” means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6.7 [*Health and Safety*] as amended by Annex 1.3 and named by the Bidder in his Bid..
- (4) “**JSSS**” or “**JICA Standard Safety Specification**” means the document of this title published officially by JICA on their website, issue number __ dated ____ and as may be modified by the Bidding Documents for the Project.
- (5) “**Method Statement**” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] as amended by Annex 1.3.
- (6) “**Operation Leader**” (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations.
- (7) “**OSHA**” means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor, U.S.A.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

Unless otherwise evident from the text, reference in OSHA to “team leader”, “on-site supervisor”, “on-site supervision”, “field superintendent”, “work chief” and the like shall be collectively construed as reference to “the Contractor’s Representative” and reference to the “safety and health manager of the Contractor” and the like shall be collectively construed as reference to the Contractor’s “Health and Safety Officer”. “The construction plan and safety and health plan”, shall be construed as the “Safety Plan”.

If any ambiguity or discrepancy is found in the OSHA documents specified in JSSS, or if any difference or discrepancy is found between OSHA documents and JSSS, the Engineer shall issue any necessary clarification or instruction.

- (8) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the agreement with JICA and utilising the funds provided by JICA under the terms mutually agreed for that purpose.

- (9) “**Safety Plan**” means a document that contains the overall risk assessments and shows the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] as amended by Annex 1.3.

“**Safety**” shall also mean “occupational health and safety” and “health and safety” all described as such in JSSS and other documents contained in the Contract.

A1.1.2. The following technical words and expressions in JSSS relating to the content of JSSS shall have the definitions stated:

- (1) “**Accident Response**” shall mean the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.20 [*Accident Response Plan*].
- (2) “**Confined Spaces**” shall mean spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Dangerous Goods**” shall mean corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (4) “**Dangerous Work**” shall mean Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.
- (5) “**Emergency Response**” shall mean the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.23 [*Emergency Response Plan*].
- (6) “**Falling Objects**” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.
- (7) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (8) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (9) “**Hazardous Substances**” shall mean any substance, whether solid, liquid or gas, that may cause harm to health.
- (10) “**Hazardous Areas**” shall mean areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as Zone 0, Zone 1 or Zone 2, where:

- (a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;
 - (b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation;
 - (c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.
- (11) “**Landslide**” means the movement of a mass of earth, rock or debris down a slope under the direct influence of gravity.
- (12) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Employer is continuing the operation and where the Contractor is required to perform Works.
- (13) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level. PPE for PFAS shall comprise of a body harness, an anchorage, connectors and typically shall include a lanyard, deceleration device, lifeline, or suitable combination of these. The use of a Safety Belt for fall arrest systems is prohibited. Wherever PFAS is provided for use, the Contractor shall ensure that it is used.
- (14) “**Personal Fall Restraint System**” or “**PFRS**” means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall. PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices. Wherever PFRS is provided for use, the Contractor shall ensure that it is used.
- (15) “**Personal Protective Equipment**” or “**PPE**” means equipment that is worn to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.
- (16) “**Safety Belt**” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard, lifeline or deceleration device. Any safety belt that has actually been subjected to a fall or previous in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for the safety of any worker.
- (17) “**Skill Training**” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.18 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (18) “**Spotter**” or “**Flagman**” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*] A reference to either **person** in JSSS shall be deemed to include a reference to the other or both.
- (19) “**Trade Effluent**” shall mean any liquid waste (effluent), other than surface water and domestic sewage that is discharged from premises being used for a business, trade or industrial process.

(20) **“Unexploded Ordnance” or “UXO”** shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.

(21) **“User Training”** means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

BMGV Biological Monitoring Guidance Values

ODA Official Development Aid

OJT On Job Training

PFAS Personal Fall Arrest System

PFRS Personal Fall Restraint System

PPE Personal Protective Equipment

PW Permanent Works

TBM Tool Box Meetings

TW Temporary Works

TWA Time Weighted Average

WEL Workplace Exposure Limits

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ANSI American National Standards Institute.

ASTM American Society for Testing and Materials.

BS British Standard.

BS EN British Standard European Norm.

HSE UK Health and Safety Executive.

ISO International Organisation for Standardisation.

ILO International Labor Organization.

JIS Japanese Industrial Standards.

Annex 1.2: Content of Safety Plan at Bid Stage

A1.2.1. At Bid Stage the Safety Plan shall be provided with brief indicative content as an outline Safety Plan. This must however, cover each of the subjects listed in this Annex, demonstrate that the Bidder understands the requirements and it shall contain clear and sufficient detail to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If any parts are superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Reference "Catch-all" Technical Standards

Refer to JSSS 1.4 [*Laws and Reference Standards*]JSSS - Laws and Reference Standards

Confirm in the Bid Stage Safety Plan whether the standards of OSHA are to apply as the "catch-all" and if not, then the Bidder shall state the name of an equivalent internationally recognised standard for health and safety of the same or similar detail, content, coverage and international acceptance as OSHA, (such as HSE or similar), in the Bid Stage Safety Plan.

(6) Bidder's Safety Certification and Implementation Policy

Refer to JSSS 1.5 [*Contractor's Safety Certification*]

Confirm which scheme the Bidder is accredited under.

Attach a valid original (or an authorised true copy) of the current certification under OHSAS 18001 or ISO 45001:2018 or approved equivalent from an internationally recognised and approved organisation, with Form ELI -1: Bidder Information Form and ELI-2 Bidder's Party Information Form.

(7) Temporary Works (TW)

Refer to JSSS 1.34 [*Temporary Works*]

A Safety Plan for TW listing the principal items, describing the content, and specifying the safety measures to be applied to ensure compliance with the requirements.

Include a description of the scope of work for the principal specialist persons to be employed in the management and design of TW and the arrangements for controlling risks arising from the design, erection, maintenance, dismantling and removal of TW.

(8) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3, the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works ensuring that the requirements of GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3, Sub-Subclauses (a) to (d) and any other requirements of the Contract are fulfilled.

(9) Safety Plan for the Permanent Works (PW)

A description of the general health and safety rules for the PW (e.g. limitation of smoking area, traveling speed on site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.) indicating measures for preventing accidents on the Site.

Particular Safety Plans for the various parts of the Works.

(10) Safety Plan for Dangerous Work.

Refer to JSSS 1.19 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.2.2 [Definitions] and GC 4.1 [*Contractor's General Obligations*] as amended by Annex 1.3.

(11) Safety Measures for Contractor's Equipment

Refer to JSSS 1.32 [*Safety Equipment, Contractor's Equipment and Temporary Works*]

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(12) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.31 [*Health and Safety Incentive Schemes*]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety and to reward for improvement.

(13) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(14) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to JSSS 1.32 [*Safety Equipment, Contractor's Equipment and Temporary Works*]

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(15) Site Inspection Plan

A description of the methods for on-Site inspections by the HSO and frequency. The description shall also include the methods for reporting, recording and utilising results.

(16) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure their health and safety.

(17) Policy for Preventing Traffic Accidents

A general description of the comprehensive measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

(18) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(19) Accident Response Plan

Refer to JSSS 1.20 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report and describe the method of investigation of causes, planning and implementation of preventive measures against recurrence.

It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.

(20) Health Care Plan

Refer to JSSS 1.33 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(21) Fire Prevention

Refer to JSSS 1.22 [*Fire Prevention*]

Details of the fire prevention services to be provided at the Site

The fire-fighting plan required by JSSS 2.8 [*Fire Prevention – Additional Requirements*].

(22) Emergency Response Plan

Refer to JSSS 1.23 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(23) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety patrols, morning toolbox meetings, 5S and KYT activities (refer to JSSS 1.12 [*Contractor's Safety Management Activities*])

(24) Safety Induction Training

Refer to JSSS 1.17 [*Safety Induction Training*]

An outline description of the proposed health and safety training plans, describing methods, facilities, participants, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(25) Skill Training

Refer to JSSS 1.18 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers.

(26) User Training

Refer to JSSS 1.35 [*User Training*]

An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.

(27) Legal requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of the workmen's accident compensation insurance and other remedies.

Annex 1.3: Required Amendments to “JICA Standard Bidding Documents”

[This Annex applies to Executing Agencies (Employers and their consultants) for use in their preparation of PQ and Bidding Documents, evaluation of Bids and award of Contracts]

JICA advise that the amendments described below shall be made to the “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA), October 2012, version 1.1. (hereinafter referred to as “JSBD”).

JICA intend to re-issue the JSBD incorporating these amendments in detail at some date in the future however, in order that JSSS can be used without delay on particular Projects, for which such use of JSSS has become effective and where the parties have formally and specifically agreed to adopt JSSS for the Project, (as described in JSSS Chapter 1: Preamble Notes, Clauses B and C), the Bidding Documents for such particular Projects shall be drafted to take account of the following amendments in advance of the re-publication of the re-issued JSBD, in accordance with the following instructions.

Amendments to JSBD Part 1: Bidding Procedures

A1.3.1 Bidders Safety Accreditation:

If a Bidder is required to be accredited in accordance with JSSS 1.5 [*Contractor’s Safety Certification*], make the following changes:

- 1) Part 1 – Bidding Procedures, Section I: Instructions to Bidders:

Change the numbering of existing clause from 4.6 to 4.7 and add the following new clause numbered 4.6:

A Bidder and all members constituting the Bidder, shall have the required certifications and/or accreditations (if any) specified in the BDS.

- 2) Part 1 – Bidding Procedures, Section **II: Bid Data Sheet:**

Add a new item referenced to ITB 4.6, stating as follows:

Required Accreditations: OHSAS 18001, ISO 45001: 2018 or equivalent from an internationally recognised and approved organisation.

- 3) Part 1 – Bidding Procedures, Section III: Evaluation and Qualification Criteria:

Modify 2.1 Eligibility to include a new item numbered 2.1.4 with the following data:

<i>Factor:</i>	Accreditation
<i>Requirement:</i>	Safety Accreditation required by ITB 4.6 and JSSS/BDS
<i>Compliance Requirement:</i>	Single Entity and JV must meet the requirements.
<i>Documentation: Forms</i>	ELI – 1 and 2, with attachments

- 4) Form ELI -1: Bidder Information Form and ELI-2 Bidder's Party Information Form:

Include an additional required attachment at the end of the bottom box of this form as follows:

4. Attached is an original or certified true-copy of

Safety Accreditation required by ITB 4.6 and JSSS/BDS

A1.3.2 Particular Safety Specification Requirements:

Part 1 – Bidding Procedures, Section I: Instructions to Bidders, Section VI. Works Requirements, Specification, pages WR-3 to WR-5.

Add the following additional text on page WR-5 to follow on from the existing text.

JICA Standard Safety Specification

JICA Standard Safety Specification (hereinafter referred to as JSSS) contains detailed requirements for health and safety including procedural requirements for the preparation, submission, review and response processes for Method Statements and Safety Plans for the execution of the Works.

Care shall be therefore be taken when drafting Bidding Documents for Projects where JSSS is to be used to ensure that there is no duplication of the JSSS requirements in the Technical Specification¹ for such Projects. Unnecessary and duplicated reference **must** be avoided.

JICA stress the importance of the Employer creating a sound working environment for the Contractor and therefore Bidding Documents should include for example: reasonable Time(s) for Completion; reasonable, continuous and unobstructed access to the Site and sufficient Site area(s), working and storage areas, all wherever possible. Requirements shall be clearly described in the Bidding Documents.

It must also be recognised that JSSS constitutes a range of standard safety requirements that shall apply generally on JICA ODA Projects and consequently it will be necessary to specify particular safety requirements for each specific Project. Such particular safety requirements shall be carefully and precisely drafted and included in the relevant parts of the Bidding Documents as noted below for such Projects and covering for example the following²:

JSSS Reference	Particular Requirements to be stated
1.7 Engineer’s Safety Representative	<p><i>(On large Projects with multiple contract packages and contractors)</i> The Bidding Documents shall state if the Engineer will appoint a full-time or part-time Safety Representative as an assistant upon the Works or state if the Engineer will act in this capacity.</p> <p>If no such requirements are stated in the Bidding Documents, it is to be assumed that the Engineer’s representative at the Site shall act in this capacity.</p>
1.9 Contractor’s Health and Safety Officer at the Site	<p><i>(On small Projects)</i> The Bidding Documents shall state if the HSO is NOT required to be assigned full-time on the Works.</p> <p>If not so stated in the Bidding Documents, the Contractor must assign a full-time dedicated HSO and if applicable other support personnel as required by JSSS.</p> <p>JICA advise that full-time assignment is the normal requirement and part-time or shared assignment is only allowable on very small projects with separate written justification to be provided by the Executing Agency to JICA.</p> <p>In addition to stating as above, if there is a requirement for the HSO, in Section IV. Bidding Forms, Bill of Quantities, Bill No.</p>

¹ To avoid any potential confusion with the “JICA Standard Safety Specification”, reference is made above to “Technical Specification” as this is the description used in JSBD although not in the FIDIC Conditions of Contract where this is defined as “Specification”.

² See also later checklist Form JSSS/CPR

JSSS Reference	Particular Requirements to be stated
	<p>1: General Items, change item 106 description to “Provide HSO and staff” with unit rate for provision being shown as “month”.</p> <p>Quantity in months shall be of the required period for provision which will usually be the Time for Completion and any required time during the Defects Notification Period.</p>
1.18 Skill Training	<p>The Bidding Documents shall state whether classroom-based skill training of counterpart Operation Leaders is, or is not required. The Contractor shall be expected in any event to provide OJT via his senior personnel to local counterparts.</p> <p>If it is required, the Bidding Documents shall state how many candidates shall be selected, for which skill groups and for how long.</p> <p>This shall be determined by the scope and nature of the Works but JICA suggest a usual maximum teaching period of three months for each candidate with say ten (10) candidates selected for four (4) skill groups, i.e. forty (40) candidates in total.</p> <p>Classroom lessons will be part-time, at least one (1) weekday and two (2) weekday evenings per week. Candidates shall be paid their full wages and allowances during teaching time.</p> <p>The Contractor shall design syllabi to compliment the candidates’ skill group, their work and position at the Site. In addition to skill training, syllabi shall include health and safety training to an international level of appreciation with a general introduction to OSHA and other international safety standards and regulations. The Contractor shall test candidates upon completion of their course, prepare and issue certificates of attendance and successful completion of each course.</p> <p>The Contractor shall provide classrooms which can also be a part of their office facilities at the Site and provide the use of Training Facilities (herein defined as including furniture, equipment, computers, sample tools and working equipment, other teaching aids and the like). Unless otherwise stated in the Bidding Documents, teachers shall be qualified and experienced foreign Operation Leaders assigned by the Contractor to the Works.</p> <p>In addition to stating as above and if there is a requirement for such classroom-based skill training, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items for:</p> <p>Assignment of Operation Leaders as teachers: Unit: man-month Quantity: Total estimated man-months</p> <p>Use of Training Facilities: Sum</p> <p>If any Training Facilities are to be handed to the Employer or issued to candidates, then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such Training Facilities shall remain the property of the Contractor and shall be removed on completion.</p>

JSSS Reference	Particular Requirements to be stated
1.19 Hazardous Substances	<p>After Site survey and investigation (if necessary) the Bidding Documents shall if there is any likelihood of the existence of Hazardous Substances at the Site of the Works or in any existing buildings and structures.</p> <p>If there is such a likelihood, then the Bidding Documents shall state this and describe the Employer's requirements for removal and disposal that must be comied with by the Contractor.</p>
1.20 Accident Response Plan	<p>The Bidding Documents shall include a listing and description of the additional services and facilities that Bidders are required to provide at the Site in addition to those already required by GC 6.7 [Health and Safety] as amended by Annex 1.3, due to the distance from urban areas, lack of immediate availability of suitable medical facilities, where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works.</p> <p>Examples of additional facilities include:</p> <ol style="list-style-type: none"> (1) Enhanced medical staff with qualified doctor(s). (2) Enhanced first aid and treatment facilities and staff. (3) Enhanced medical equipment, medical supplies, medicines and drugs. (4) Additional treatment and recovery rooms. (5) An equipped ambulance based at the Site with qualified driver and attenders on full time twenty-four (24) hour, seven (7) day per week, stand-by duty. (6) Emergency air-ambulance services. <p>In addition to stating as above, if there is a requirement for such additional facilities, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as "Sum" and unit rate/quantity for provision being shown as "month".</p> <p>Quantity in "months" shall be of the required period for provision which will usually be the Time for Completion and any required time during the Defects Notification Period.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>
1.20.8 Community Medical Support	<p>The Employer, by agreement with JICA, may also wish to extend the provision of first aid, medical and health services and facilities at the Site for the use of any local community or third parties or neighbours, not connected with the Works but living directly</p>

JSSS Reference	Particular Requirements to be stated
	<p>adjacent to and potentially affected by the Works.</p> <p>If this becomes a requirement, the scope, extent and duration of such services and facilities shall be carefully described in the documents together with the responsibility (if any) and obligations of the Contractor (or Employer) to insure.</p>
<p>1.22 Fire Prevention</p>	<p>Without reducing the Contractor's obligations, the Bidding Documents shall describe the particular scope of fire prevention services that are to be provided by the Contractor for the Works.</p> <p>An appropriate pay item shall be included for this in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as "Sum" and unit rate/quantity for provision being shown as "month".</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>
<p>1.23 Emergency Response Plan</p>	<p>In higher risk areas, the Employer may require the Contractor to establish, train and maintain a specialist team at the Site to assist in the event of an emergency as described in JSSS 1.23. The Bidding Documents shall specify the size of the team and shall also specify in detail the equipment to be provided so that the Contractor is made fully aware and is able to assess the extent, risk and cost of the requirements.</p> <p>An appropriate pay item shall be included for this in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as "Sum" and unit rate/quantity for provision being shown as "month".</p>
<p>1.26 Project Safety Committee</p>	<p><i>(On large Projects with multiple contract packages and contractors)</i> The Bidding Documents shall state if a Project Safety Committee is to be established for the Project and describe any further requirements.</p>
<p>1.27 Health and Safety Coordination with Other Contractors, refer also to GC 2.3 [Employer's Personnel]</p>	<p>(JSSS 1.27.2) The Bidding Documents shall describe the individual scope of Works for any other contractors to be employed by the Employer on the Site and where possible identify them by name. Also list any legally constituted public authorities who may be employed in the execution on or near the Site of any work not included in the Contract, and specify scope, working locations, access and timing as far as possible.</p>
<p>1.33 Health Matters</p>	<p>The Bidding Documents shall include a listing and description of the additional services and facilities that Bidders are required to provide at the Site in addition to those already required by GC 6.7 [Health and Safety] due to the distance from urban areas, lack of immediate availability of suitable medical facilities, where local health authorities do not exist or are lacking in capability or</p>

JSSS Reference	Particular Requirements to be stated
	<p>standard of care, or where so required by the nature of the Works.</p> <p>Examples of additional facilities include:</p> <ol style="list-style-type: none"> (1) Enhanced medical staff with qualified doctor(s). (2) Enhanced first aid and treatment facilities and staff. (3) Enhanced medical equipment, medical supplies, medicines and drugs. (4) Additional treatment and recovery rooms. (5) An equipped ambulance based at the Site with qualified driver and attenders on full time twenty-four (24) hour, seven (7) day per week, stand-by duty. (6) Emergency air-ambulance services. <p>In addition to stating as above, if there is a requirement for such additional facilities, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items, with unit for provision of facilities shown as “Sum” and unit rate/quantity being shown as “month”.</p> <p>Quantity in “months” shall be of the required period for provision which will usually be the Time for Completion and any required time during the Defects Notification Period.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.</p>
1.34 Temporary Works	<p>The Bidding Documents shall state if Bidders shall comply with BS5975: 2019 on the Works, for which purpose, reference shall be made to the basic criteria described in JSSS 1.34.</p> <p>If Bidders are required to comply with BS5975: 2019, the Bidding Documents shall include a listing and description of the required staff for the coordination, design and supervision of the Temporary.</p> <p>Examples of such staff include:</p> <ol style="list-style-type: none"> (1) Temporary Works Coordinator (TWC). (2) Temporary Works Designer (TWD). (3) Temporary Works Supervisor (TWS). <p>The Bidding Documents shall require Bidders to name TWC and TWD in the Bid for which purpose reference is to be made to this Annex 1.3.</p>

JSSS Reference	Particular Requirements to be stated
	<p>If Bidders are NOT required to comply with BS5975: 2019, the Bidding Documents shall state that Bidders are to comply in any event with the requirements of JSSS 1.34.12 and submit full details in the Safety Plan.</p> <p>In addition, separate written justification shall be provided by the Executing Agency to JICA.</p>
1.35 User Training	<p>The Bidding Documents shall state whether User Training of Employer's Personnel is required so that the Works or any part or Section thereof can be used, operated and maintained safely.</p> <p>If it is required, the Bidding Documents shall modify or add to the requirements of JSSS 1.35 and state the precise requirements including details of required training, numbers of candidates and duration of training.</p> <p>This shall be determined by the scope and nature of the Works and the number of users, management staff, operators, maintenance staff who will be engaged upon the Works.</p> <p>Lessons will be full-time.</p> <p>The Contractor shall design syllabi to compliment the training courses and in addition to user training, syllabi shall include health and safety training to an international level of appreciation with a general introduction to OSHA and other international safety standards and regulations. The Contractor shall test candidates upon completion of their course, prepare and issue certificates of attendance and successful completion of each course.</p> <p>In addition to stating as above and if there is a requirement for such user training, appropriate pay items shall be included for each of the above in Section IV. Bidding Forms, Bill of Quantities, Bill No. 1: General Items for:</p> <p>Assignment of teachers for user training Unit: man-month Quantity: Total estimated man-months</p> <p>Provision and use of Training Facilities: Sum</p> <p>If any Training Facilities are to be handed to the Employer or issued to candidates, then this shall be clearly stated, items shall be listed with quantities and fully specified in the Bidding Documents, otherwise all such Training Facilities shall remain the property of the Contractor and shall be removed on completion.</p>
1.36 Unexploded Ordnance	<p>After Site survey and investigation (if necessary) the Bidding Documents shall if there is any likelihood of the existence of UXO on the Site.</p> <p>If there is such a likelihood, then the Bidding Documents shall state this and describe the Employer's procedures for the removal and disposal of UXO.</p> <p>As an exception the Employer shall submit reasons for choosing</p>

JSSS Reference	Particular Requirements to be stated
	<p>the alternative method to JICA on Form JSSS/CPR - Checklist of Particular Requirements in Bidding Documents and confirm that investigation and removal shall be the responsibility of the Bidder and describe the requirements and procedures</p>
<p>A.1.1.2 (11) Work in Operational Areas</p>	<p>If the Works are to be executed in whole or in part in Operational Areas (as defined in Annex 1.1) this shall be stated and times of operation and conditions with any restrictions on the Contractor's working methods, times and arrangements shall be described in detail.</p> <p>The respective responsibilities for insurance, health and safety management, security, health and welfare facilities, etc., between the Employer and Contractor(s) shall be clearly described so that there is no doubt over what each party is to perform or provide. A copy of the Employer's working procedures, including their health and safety procedures shall be provided to Bidders for their study during the Bidding period.</p>
<p>2.2: Site Perimeter Fencing:</p>	<p>The Bidding Documents shall describe the required Site Perimeter fencing the—showing the required extent, dimensions, constructional details and specification, whether temporary or permanent and this shall also be shown on the Drawings.</p> <p>Permanent or temporary fencing within the Site shall be described and shown for example around hazardous areas or around operating plant areas.</p> <p>Gates barriers and other treatment at Site entrances shall be described together with any arrangements for communications, lighting and power supply.</p> <p>Requirements for security at the Site entrance and also around the site shall be described and whether this is to be provided by the Contractor or the Employer.</p>
<p>Offices, Accommodation and Related Amenities and Facilities</p>	<p>The Bidding Documents shall describe the required Employer's, Engineer's and Contractor's construction offices, staff accommodation and related amenities and facilities to be provided by the Contractor and describe the responsibility for the maintenance and repair of same. The Bidding Documents show the required scope, design, constructional details and specification, whether temporary or permanent and this shall also be shown on the Drawings.</p> <p>The Contractor's responsibility for potable water supply, water and power supply, waste water and sewage drainage and treatment shall be clearly described and shown.</p> <p>The extent of provision by the Contractor shall take due account of the nature and location of the Site and the condition of access thereto.</p> <p>If any facilities as required under the Contract or additional facilities as required by JSSS are to be handed to the Employer on taking over then this shall be clearly stated, items shall be listed</p>

JSSS Reference	Particular Requirements to be stated
	with quantities and fully specified in the Bidding Documents, otherwise all such facilities shall remain the property of the Contractor and shall be removed on completion.

To assist with compliance of the above requirements, a checklist has been prepared and is attached to this Annex 1.3.

A1.3.3 Required Detail of Bid Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Safety Plan, page BF-33.

Delete “[Insert Safety Plan]” and in this place insert the following:

Copy and paste here the exact same final text of JSSS Annex 1.2 as ultimately agreed.

A1.3.4 Bid Evaluation Requirements for Safety Plan:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section III. Evaluation and Qualification Criteria, 1, Evaluation, 1.1 Evaluation of Technical Bids.

(Applies to both Section III. Evaluation and Qualification Criteria (Following Prequalification) and Section III. Evaluation and Qualification Criteria (Without Prequalification), Pages EQC-1)

In the paragraph stating [Evaluation of the Bidder’s Technical Proposal will include an assessment of the Bidder’s technical capacity to mobilise key equipment and personnel for the Contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI, Works Requirements.] insert “and Safety Plan” in the third line after the words, “work methods”.

Insert the following additional paragraph after the above paragraph:

“Evaluation of the Safety Plan shall take account of the Health and Safety Officer, and if compliance with BS5795: 2019 is a specified requirement of the Bidding Documents (refer to JSSS Annex 1.3) of any principal Temporary Works coordination, design and supervision staff, in item 1.1.2 Personnel and of PPE and any other safety equipment from the Safety Plan in item 1.1.3 Equipment.”

A1.3.5 Health and Safety Officer and (if applicable) Temporary Works staff:

Part 1 – Bidding Procedures, Section I. Instructions to Bidders Section III. Evaluation and Qualification Criteria against 1.1.2 Personnel.

Delete position 2 as stated and insert as follows:

- 2 Health and Safety Officer at the Site

Delete position 3 and the words “e.g. Health and Safety (Accident Prevention Officer) and insert the following:

(if any of the following are a specified requirement of the Bidding Documents by reference to JSSS Annex 1.3):

3. Temporary Works Coordinator
4. Temporary Works Designer
5. Temporary Works Supervisor

On the following line insert the words:

Other personnel to be inserted as appropriate.

Under “Notes for Employer” delete notes 1 and 2 and in this place insert the words:

The proposal for all required personnel shall be evaluated.

A1.3.6 Bidder’s Safety Declaration (Form JSSS/BSD):

Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms

Include “Form JSSS/BSD – Bidder’s Safety Declaration” in the Bidding Documents after the existing Form-ACK, with new page BF-56; renumber existing pages BF-56 and BF-57 appropriately and insert suitable reference in the Table of Forms on page BF-1.

The Employer requires all Bidders to appoint the Health and Safety Officer at the Site (HSO) prior to Bid submission and this HSO shall sign Form JSSS/BSD in addition to the Bidder’s Official Representative.

Please refer to end of this JSSS Annex1.3 for a copy of Form JSSS/BSD

Amendments to JSBD Part 3 - Particular Conditions of Contract

The following GC Sub-Clauses are to be modified as stated and as a consequence, future reference to these numbered Sub-Clauses, shall be to PC rather than GC.

A1.3.7 Submission and Review of Method Statements and Safety Plans:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause GC 4.1 Contractor’s General Obligations</p>	<p><i>Delete that part of the fifth paragraph of this Sub-Clause which states:</i></p> <p>The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.”</p> <p><i>and in this place insert:</i></p> <p>(a) The Contractor shall, whenever required by the Engineer, submit Method Statements and/or Safety Plans each with details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the request.</p> <p>(b) The Engineer may review the Method Statements and/or Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Method Statement and /or Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.</p> <p>If the Engineer gives no such notice of non-compliance for the original Method Statement and/or Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted Method Statement and/or Safety Plan within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement and/or Safety Plan subject to</p>
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	<p>complying with his other obligations under the Contract.</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement and/or Safety Plan subject to his other obligations under the Contract.</p> <p>(d) The Contractor shall submit a revised Method Statement and/or Safety Plan whenever required by the Engineer or when any previous Method Statement and/or Safety Plan for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site in accordance with the requirements described in items (a) to (c) above.</p>
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A1.3.8 JSSS Comprised as Part of the Contract with Further Safety Requirements:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause GC 4.8 Contractor's Health and Safety Obligations</p>	<p><i>Delete this Sub-Clause completely and replace with the following:</i></p> <p>The Contractor shall:</p> <ul style="list-style-type: none"> (a) Comply with all applicable health and safety Laws of the Country, all standards and regulations, (b) Comply with all applicable health and safety obligations specified in the Contract including those contained in the JICA Standard Safety Specification (JSSS) and which as an entire document is to be read and construed as an integral part of the Contract by virtue of this Contract Sub-Clause amendment; (c) Comply with all directions issued by the Contractor's Health and Safety Officer (appointed under Sub-Clause 6. 7 [<i>Health and Safety</i>] as amended by this JSSS Annex 1.3; (d) Take care of the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed; (e) Keep the Site, the Works (and the other places (if any) where the Works are being executed) clear of unnecessary obstruction so as to avoid
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	<p>danger to these persons;</p> <p>(f) Provide fencing, lighting, safe access, guarding and watching of:</p> <p>(i) the Works, until the Works are taken over under Clause 10 [<i>Employer's Taking Over</i>]; and</p> <p>(ii) any part of the Works where the Contractor is executing outstanding works or remedying any defects during the Defects Notification Period; and</p> <p>(g) Provide any Temporary Works (including roadways, footways, guards and fences) that may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land and property.</p> <p>Within twenty-eight (twenty-eight (28) days of the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site, the Contractor shall submit to the Engineer for information an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>This shall be based upon the Safety Plan issued at bid stage, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan to demonstrate the Contractor's intended compliance with the Contract.</p> <p>This document shall be in addition to any other similar document required under applicable health and safety Laws of the Country.</p> <p>This Safety Plan shall set out or refer to all the health and safety requirements:</p> <p>(a) that are stated in JSSS;</p> <p>(b) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and</p> <p>(c) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Works are being executed.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer, shall be in accordance with GC 4.1 [<i>Contractor's General</i></p>
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	<p><i>Obligations</i>] as amended by Annex 1.3.</p> <p>The Safety plan shall be revised as necessary by the Contractor or the HSO or at the reasonable request of the Engineer and each revision shall be submitted promptly to the Engineer for his information.</p> <p>In addition to the safety reporting requirements of sub paragraph (g) of Sub-Clause 4.21 [<i>Progress Reports</i>] the Contractor shall inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.</p> <p>The Contractor shall, comply with the health and safety recording and reporting requirements of JSSS.</p> <p>The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p> <p>Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.</p>
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A1.3.9 Change “accident prevention officer” to “Health and Safety Officer”:

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause GC 6.7 Health and Safety	<i>In the second paragraph, delete the words “accident prevention officer at the Site” and insert “Health and Safety Officer at the Site”</i>
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A1.3.10 Revised Order of Priority of Documents

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

Sub-Clause GC 1.5 Priority of Documents	<p><i>Delete sub-items (a) to (i) and insert the following sub-items (a) to (j):</i></p> <ul style="list-style-type: none"> (a) the Contract Agreement (if any), (b) the Letter of Acceptance, (c) the Letter of Tender, (d) the Particular Conditions - Part A, (e) the Particular Conditions - Part B, (f) these General Conditions, (g) the JICA Standard Safety Specification (JSSS) and the signed Bidder’s Declaration,
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	<p>(h) the Specification,</p> <p>(i) the Drawings, and</p> <p>(j) the Schedules and any other documents forming part of the Contract.</p>
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A1.3.11 Raised Awareness of Available Resources on ODA Projects

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause GC 6.9</p> <p>Contractor's Personnel</p>	<p><i>Add the following paragraphs to the end of the existing Sub-Clause:</i></p> <p>The Contractor shall be deemed to be aware that in many countries and locations for which Official Development Aid (ODA) is provided, the qualified, skilled and experienced Contractor's Personnel required by this Sub-Clause is frequently not available or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, quality and performance that is demanded for these ODA Projects.</p> <p>The Contractor shall therefore be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries and all of whom shall be appropriately qualified, skilled and experienced to the standards required and sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.</p> <p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Contract.</p> <p>Without limiting the Contractor's obligations under the first two above added paragraphs of this Sub-Clause, the Contractor shall also employ counterpart local Contractor's Personnel with whom the Contractor shall implement a policy of mutual cooperation and ensure that this is adopted by all other Contractor's Personnel who shall work closely with and transfer necessary knowledge and skills to the counterpart staff to raise skill levels and awareness of international standards.</p> <p>The Contractor shall provide further skill training including classroom courses for all local personnel to compliment the direct on-job-training.</p> <p>The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic qualification, with copies provided to the Engineer if so requested by the Engineer.</p>
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	<p>Details of such training shall be submitted with the Bid Safety Plan.</p> <p>Any such employment, training and academic qualification and employment of local personnel shall not mean that the Contractor can demobilise the imported resources unless the Contractor and Engineer are satisfied that the remaining Contractor's Personnel are able to act fully in accordance with the requirements of the Contract.</p>
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A1.3.12 Assignment of Foreign Personnel on ODA Projects

Part 3 – Conditions of Contract and Contract Forms, Section VIII. Particular Conditions, Part B - Specific Provisions.

<p>Sub-Clause GC 6.12 Foreign Personnel</p>	<p><i>Insert the following additional paragraph after the first paragraph of Sub-Clause 6.12:</i></p> <p>Such foreign personnel shall be qualified, skilled and experienced Personnel of Operation Leader status or above.</p> <p>Unless otherwise stated in the Bidding Documents, the Contractor shall not bring into the Country any unqualified, unskilled or inexperienced foreign Contractor's Personnel.</p>
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A1.3.13 Listing of Documents to be included in the Contract Agreement:

Part 3 – Conditions of Contract and Contract Forms, Section IX. Annex to the Particular Conditions - Contract Forms

<p><i>[Option A: One-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p><i>In paragraph 2. delete sub-items (i) to (ix) and insert the following sub-items (i) to (x):</i></p> <ul style="list-style-type: none"> (i) the Letter of Acceptance; (ii) the Letter of Bid; (iii) the addenda Nos <i>[insert addenda numbers, if any]</i> (if any); (iv) the Particular Conditions; (v) the General Conditions; (vi) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration; (vii) the Specification; (viii) the Drawings; (ix) the completed Schedules; and (x) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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and:

<p><i>[Option B: Two-Envelope Bidding]</i></p> <p>Contract Agreement</p>	<p><i>In paragraph 2. delete sub-items (i) to (x) and insert the following sub-items (i) to (xi):</i></p> <ul style="list-style-type: none">(i) the Letter of Acceptance;(ii) the Letter of Technical Bid;(iii) the Letter of Price Bid;(iv) the addenda Nos [<i>insert addenda numbers, if any</i>] (if any);(v) the Particular Conditions;(vi) the General Conditions;(vii) the JICA Standard Safety Specification (JSSS) and signed Bidder's Declaration;(viii) the Specification;(ix) the Drawings;(x) the completed Schedules; and(xi) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.
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Form JSSS/CPR - Checklist of Particular Requirements in Bidding Documents

[This form is to be prepared by the Executing Agency after completing the preparation of the PQ and Bidding Documents and submitted to JICA local office together with the Draft PQ and Bidding Documents when the concurrence of JICA is being requested for these documents]

JSSS Reference	Requirement:	Yes (✓)	No (✓)	If not default, explain why:	Default and Notes
1.5 Bidder's Safety Accreditation	<i>Required or not.</i>				Default is "Yes",
	<i>Documents fully amended</i>				Default is "Yes".
1.7 Engineer's Safety Representative	<i>Required to be assigned or not.</i>				Default is "No", not required except on large projects.
1.9 Contractor's Health and Safety Officer at the Site	<i>Required to be assigned full-time or not</i>				Default is "Yes", normally required to be full time
1.19.12 Hazardous Substances	<i>Are any likely to exist?</i>				Default is "No". If "Yes" Full detail and copy of survey shall be provided in Technical Specification and requirements for removal
1.20 Accident Response Plan	<i>Additional facilities required at Site or not</i>				Default is "Yes", full detail shall be provided in Technical Specification (unless local facilities are readily available)
1.20.8 Community Medical Support	<i>Required or not</i>				Default is "No", unless agreed earlier with JICA
1.22 Fire Prevention	<i>Additional facilities required at Site or not</i>				Default is "Yes", full detail shall be provided in Technical Specification (unless local facilities are readily available)
1.23 Emergency Response Plan	<i>Full details of additional rescue facilities provided</i>				Default is "No", unless higher risk area
1.26 Project Safety Committee	<i>Required or not.</i>				Default is "No", not required except on

JSSS Reference	Requirement:	Yes (✓)	No (✓)	If not default, explain why:	Default and Notes
					large projects.
1.27 Health and Safety Coordination with Other Contractors, refer also to GC 2.3 [Employer's Personnel]	Full details provided by Employer				Default is "Yes". Full detail shall be provided in Technical Specification
1.33 Health Matters	Additional facilities required at Site or not				Default is "Yes", full detail shall be provided in Technical Specification" (unless local facilities are readily available)
1.34 Temporary Works	Compliance with BS 5975:2019 required or not				Default is "Yes".
1.35 User Training	Full details provided by Employer				Default is "Yes". Full detail shall be provided in Technical Specification
1.36 Unexploded Ordnance	Is it likely to exist?				Default is "No". If "Yes" Full detail shall be provided in Technical Specification
	If yes is Employer to remove?				Default is "Yes". Full detail shall be provided in Technical Specification
	If yes is Contractor to remove?				Normally "No" If Contractor to remove, state why.
A.1.1.2 (11) Work in Operational Areas	Operational Areas exist on the Site?				No default
	If Operational Areas exist on the Site full detail provided?				If applicable, default is "Yes".

JSSS Reference	Requirement:	Yes (✓)	No (✓)	If not default, explain why:	Default and Notes
A.1.1.2 (11) Work in Operational Areas	<i>Full details provided by Employer</i>				Default is “Yes”. Full detail shall be provided in Technical Specification
2.2: Site Perimeter Fencing:	<i>Full details provided by Employer</i>				Default is “Yes”. Full detail shall be provided in Technical Specification
Offices, Accommodation and Related Amenities and Facilities	<i>Full details provided by Employer</i>				Default is “Yes”. Full detail shall be provided in Technical Specification
A1.3.3 Required detail of Safety Plans	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.4 Bid Evaluation Requirements for Safety Plan	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.5 Health and Safety Officer and (if applicable) Temporary Works staff	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.6 Bidder’s Safety Declaration (Form JSSS/BSD)	<i>Bidding Documents amended to include the Form JSSS/BDS?</i>				Default is “Yes”.
A1.3.7 Submission and Review of Method Statements and Safety Plans	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.8 JSSS Comprised as Part of the Contract with Further Safety Requirements	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.

JSSS Reference	Requirement:	Yes (✓)	No (✓)	If not default, explain why:	Default and Notes
A1.3.9 Change “accident prevention officer” to “Health and Safety Officer”	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.10 Revised Order of Priority of Documents	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.11 Raised Awareness of Available Resources on ODA Projects	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.12 Assignment of Foreign Personnel on ODA Projects	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.
A1.3.13 Listing of Documents to be included in the Contract Agreement	<i>Bidding Documents amended to show the full requirements?</i>				Default is “Yes”.

Name of Project:

Loan Number:

Package Number

Package Description

Signed:

Signed:

(Executing Agency: Official Representative)

(Consultant: Authorised Representative)

Signatory Name:

Signatory Name:

Date: _____

Date: _____

Address:

Address:

Form JSSS/BSD - Bidder's Safety Declaration

[Refer to earlier Annex 1.3 item 1.3.6: This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page BF-56; renumbering existing pages BF-56 and BF-57 appropriately and inserting suitable reference in the Table of Forms on page BF-1]

I, *[insert name and position of authorised signatory]*, being duly authorized by *[insert name of Bidder/members of joint venture ("JV")]* (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD hereby declare our commitment to comply with the requirements of the JICA Standard Safety Specification (JSSS).

The Bidder declares, that if selected to undertake the Works in connection with the Contract, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Employer's Personnel and the Contractor's Personnel and any other persons entitled to be thereon or that may be affected by operations thereby and that the Bidder is aware and accepts to follow all of the relevant health and safety Laws of the Country and the requirements of JSSS.

Irrespective of the Laws of the Country and the enforcement or otherwise of same, the Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, Personal Protective Equipment, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder declares that he will import for sole use upon the Works (where not available in the Country):

1. New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old unless otherwise pre-inspected at origin by the Engineer at the Contractor's expense and pre-approved), all fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, academic qualification, experience and capability;
3. Fully inform workers about hazards;
4. Provide health and safety training to all Contractor's Personnel and Employer's Personnel in a language and vocabulary they can understand;
5. Keep accurate records of work-related injuries and illnesses;
6. Perform tests in the workplace, such as air sampling as required by JSSS;
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned;

9. Provide eyesight, hearing and mobility examinations and other medical tests required by JSSS;
10. Post injury and illness information and data where workers can see them;
11. Inform the Engineer and submit details of any accident or illness as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately; and
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if he is successful with his Bid, the Health & Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If our Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety
Officer at Site)

Name:

Date: _____

Annex 1.4: Form JSSS/SAR - Sample Accident Report

[This form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.21. The Engineer shall forward a copy to the JICA local office for JICA information and record]

Name of Project:	Loan Number:
Package Number:	Package Description;
Contractor: (name and address)	Employer: (name and address)
Engineer: (name and address)	JICA Local Office Address:
Accident Report Submission Date and Number:	Issue Number:
FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location:	
4) Brief background and apparent cause:	
5) Number of casualties:	
6) Description of injuries incurred:	
7) Date, time and location of treatment:	
8) Present medical status of casualties:	
9) Present location of casualties:	
10) Present work status:	
SUBSEQUENT REPORT INFORMATION (POST-INVESTIGATION):	
1) Cause(s) of the accident:	
2) Longer term treatment of casualties:	

3) Assistance provided to casualties and their dependents:	
4) Settlement damages/expenses paid to casualties:	
5) Claims agreed and settled	
6) Covered by Contractor's insurance:	
7) Counter-measures to avoid recurrence of similar accidents and risks:	
8) Lessons learned from the accident:	
9) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
10) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
11) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
12) Other Information:	

<p>Report Prepared by:</p> <p>(name): _____</p> <p>(sign) : _____</p> <p>Report Submission Date(s) _____</p> <p style="text-align: center;">Time: _____</p>	<p>Contractor's Health and Safety Officer (HSO)</p>
<p>Receipt acknowledged by:</p> <p>(name): _____</p> <p>(sign): _____</p> <p>Report Receipt Date(s) _____</p> <p style="text-align: center;">Time: _____</p>	<p>Engineer</p>

Annex 1.5: Subjects of Skill Training Course for Counterpart Operation Leaders

Under FIDIC GC 6.9, “The Contractor’s Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations.”

This is a basic requirement and it is not incumbent upon the Employer to accept otherwise or to pay further for skill training of the Contractor’s Personnel to achieve this standard.

However please refer to JSSS 1.18 [Skill Training] which we have added to provide OJT and also classroom-based skill training for local counterpart Operation Leaders. The idea is that skill knowledge will be passed on by them in future.

We suggest that Skill Training shall be according to the scope of Works in the Project with the emphasis on direct OJT if necessary from foreign Operation Leaders.

This could/should be complimented by some classroom training, testing and even perhaps certifying in some way by the contractor.

However, the syllabus so far prepared is far too complicated and will be difficult to understand and apply.

Please can this be simplified.

Consideration must also be given to payment for this and it is necessary to include a simple payment mechanism in the Bidding Documents for such training otherwise it will not happen.

Please refer to Annex 1.3, where I have included some suggestions.

Annex 1.xxx: Dangerous or Harmful Operations

Recommend that this is not used

Dangerous Work has now been specifically defined (See Annex 1.1 definitions) and in a much wider sense and we recommend that this Annex 1.xxx is now not applicable and not necessary; it has little or no meaning.

Annex 1.xxx: Subjects of Special Education for Dangerous or Harmful Operations

Awaiting further information from NK

This is not recommended; the contractor is responsible for determining what is dangerous or not, not JICA and he is then responsible for whatever methods, education, choice of equipment etc. etc. to make certain that workers are able to work safely in such “dangerous” or “harmful operations”.

It is possible that if JICA state what education is required and if the contractor then chooses to employ an unqualified workforce but educates then as requested by JSSS and there is then an accident, JSSS/JICA could be adjudged in some way responsible.

We understood that this is not the intention of JSSS.

*When Contractor’s Personnel are engaged in any operations including potentially dangerous or harmful operations ALL personnel shall be selected by the contractor as qualified and experienced and given all necessary health, safety **and skill** training by the Contractor appropriate to the operations concerned. There is no advantage on giving examples to a contractor who should already know what is required, is responsible, is being paid for this and has insured for the consequences.*

Annex 1.xxx: Work Requiring the Assignment of an Operation Leader

Please refer to JSSS 1.19 and Annex 1 definition of Operation leaders.

This Annex 1.xxx is not necessary, not recommended and potentiality creates a liability for JICA.

What if it excludes some work and there is an accident?

NO worker should be left to work on his own, ALL should be trained, skilled and guided and properly supervised.

Also, Operation Leaders are not by definition one type of skilled person, there are many different kinds each so qualified according to his skill group and trade.

**JICA Standard Safety Specification Preparation Study
7.6 Working Platform (English Draft R1)**

2019.10.27 Japanese 1.8&1.9Prov. Final
2019.11.25 NK Draft R0

<p align="center">JSSS 1.8&1.9 in Japanese (Provisional Final Draft 10/27) Red color sentences/words are added/revised ones from the original.</p>	<p align="center">JSSS 1.8&1.9 in English R0 (drafted 11/5-sent 11/25) Sentences/words marked in yellow are added/revised ones from the original JSSS in English translated from Japanese</p>	<p align="center">To MD (11/25)</p>
<p>1. 総則</p> <p>1.8 請負者の要員の適正配置</p> <p>1.8.1 要員の適正配置上の留意点</p> <p>請負者は、以下の事項を考慮し、作業に必要な資格・技能・経験を有する要員を適正に配置しなければならない。</p> <p>請負者は要員の配置を記録し、安全衛生管理者は適正な配置を確認する。エンジニアはこの記録を随時閲覧できるものとする。</p> <p>(1) 作業内容及び作業環境 (2) 業務経験、能力等 (3) 18歳未満の者に対する配慮 (4) 健康状態、毎日の作業前の健康状態 (5) 作業量の適正配分</p> <p>なお、健康状態に関する書類(既往歴と健康診断結果等)は、当該国における個人情報保護に関する法令を遵守し保管しなければならない。</p>	<p>1. General</p> <p>1.8 Proper Placement of Contractor's Personnel</p> <p>1.8.1 Points of Proper Placement of Contractor's Personnel</p> <p>The Contractor shall properly assign the Contractor's personnel who have the necessary qualifications, skills, and experience considering the following matters.</p> <p>The Contractor shall record the placement of workers and the Health and Safety Officer shall confirm the appropriateness of placement. The Engineer shall be able to view the record at any time.</p> <p>(1) Work content and work environment (2) Work experience and ability etc. (3) Consideration for workers under 18 (4) Health condition, and health condition before daily work starts (5) Proper allocation of work volume</p> <p>In addition, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the laws and regulations concerning personal information protection in the relevant country.</p>	<p>As I informed you in the last October, JICA and NK discussed Operation Leader (OL)</p> <p>The discussion was made about works for OL to be assigned (high risk works), responsibilities of OL and example syllabus for education/training for OL as shown in the left.</p> <p>I know and understand your opinion about these as you already specified and commented in the JSSS Issue 6.</p> <p>This is one of issues to be discussed in January, therefore I would like to send you for your information for next meeting though I have not yet reviewed the contents in English R0 prepared by our member.</p> <p>I would like to discuss these next year.</p> <p>Thank you.</p> <p>Sakoda</p>
<p>1.8.2 作業主任の配置</p> <p>請負者は、各作業の安全を確保するために、各作業を直接指揮・監督する下記の作業主任を、各作業に配置しなければならない。</p> <p>(1) 作業主任の任命</p> <p>請負者は、円滑な作業の遂行と労働災害の防止のために、当該作業に対する十分な経験及び作業能力を有し、作業チームの作業員を適切に指揮・統率する能力があると請負者が認めるもの(competent person)を、作業主任として任命し、その者に当該作業の作業員の指揮、その他次の(2)に定める事項を行わせなければならない。</p> <p>(2) 作業主任の職務</p> <p>作業主任は、作業計画及び安全計画に基づき、請負者が定めた枠組みの中で、作業チームで行う作業に関し、以下の職務を遂行しなければならない。</p> <p>(a) 作業を直接指揮し、作業員の監督、作業員への指示、進行状況の監視を行うこと。 (b) 作業内容に応じて作業員を適正に配置すること。 (c) 使用する材料の欠点の有無を点検し、不良品を取り除くこと。</p>	<p>1.8.2 Placement of Operation Leaders</p> <p>In order to ensure the safety of each work, the Contractor shall assign an Operation Leader who directly supervise the work.</p> <p>(1) Appointment of Operation Leaders</p> <p>The Contractor shall appoint a competent person who has sufficient experience and ability to perform the work smoothly and prevent occupational accidents to the Operation Leader, and shall instruct him to direct and lead the workers of the work team as well as performing other matters specified in (2) below.</p> <p>(2) Duties of Operation Leaders</p> <p>Based on the method and Safety Plan, the Operation Leader shall fulfill the following duties regarding work performed by the team within the framework (responsibilities) defined by the Contractor.</p> <p>(a) Direct the work, give instructions and supervise the workers, and monitor the progress. (b) Place workers appropriately according to the work content.</p>	

<p>(d) 作業に係る設備及び作業場所、使用する機械、器具、工具の日常点検を行うこと。</p> <p>(e) 上記の設備、作業場所、機械、器具、工具に異常を認めるときは、作業を開始しないこと、又は直ちに作業を中止すること。異常を請負者の監督員 (Contractor's superintendent) に報告すること。</p> <p>(f) 当該作業に関する安全措置が安全計画に従い講じられているかどうかを確認すること。</p> <p>(g) 要求性能墜落制止用器具、保護帽等の保護具の使用状況を監視すること。</p> <p>(h) 非常時の退避の方法を、作業員にあらかじめ指示すること。</p> <p>(i) 作業の危険性及び有害性を発見した場合、必要に応じ対策を行う、又は請負者の監督員に報告すること。</p> <p>(j) 必要に応じ作業環境の改善を、監督員へ提案すること。</p> <p>(k) 2.7 [悪天候及び地震時の対策]に規定する状況の発生時、又はその他仮設物等の異常発生時において、作業の中止、監督員への連絡等を含む対応を行うこと。</p> <p>(l) 1.12[事故発生時の措置]に従い、事故発生時の対応を行うこと。</p> <p>(m) 作業員の安全意識を高めること。</p> <p>(3) 作業主任を任命したときは、氏名、担当事項を作業場の見やすい箇所に掲示し、作業員に周知すること。</p>	<p>(c) Check the material used for defects and remove defective products.</p> <p>(d) Perform daily inspections of equipment, machines, instruments and tools used and work place related to the work.</p> <p>(e) If any defect or abnormality is found in the above equipment, work place, machine, instrument or tool, do not start the work or stop the work immediately and report the anomaly to the Contractor's superintendent.</p> <p>(f) Check if the necessary safety measures for the work are taken according to the Safety Plan.</p> <p>(g) Monitor the usage of personal protective equipment such as personal fall restraint system and safety helmet.</p> <p>(h) Instruct workers in advance how to evacuate in case of an emergency.</p> <p>(i) If any work hazard is found, take measures as necessary or report them to the Contractor's superintendent.</p> <p>(j) Propose improvements to the work environment as necessary to the superintendent.</p> <p>(k) When the situation specified in 2.7 [Countermeasures against Adverse Weather and Earthquakes] occurs, or other abnormalities such as temporary structures are noticed, take measures including stopping the work and contacting superintendents.</p> <p>(l) Take actions in the event of an accident in accordance with 1.12 [Measures at the Time of Accident Occurrence].</p> <p>(m) Increase workers' safety awareness.</p> <p>(3) When appointing the Operation Leaders, post the name and works in charge in an easy-to-read place in the workplace to notify the workers.</p>	
<p>1.9 安全衛生教育訓練</p> <p>1.9.1 教育訓練の実施</p> <p>請負者は、当該国の法律を遵守し、安全衛生管理者主導の下、教育訓練を次の請負者の要員を対象に行わなければならない。</p> <p>(a) 新規入場者及び作業内容の変更が予定される者</p> <p>(b) 危険又は有害な業務へ配置予定の者</p> <p>(c) 作業主任に任命が予定されている者</p> <p>ただし、当該業務に関し当該国の公的機関が発行する資格の保持者又は当該国若しくは他国の公的機関が実施する教育訓練の受講終了者等で、教育の項目の全部又は一部について十分な知識及び技能を有していると請負者が判断する作業員については、当該項目についての教育を省略することができる。</p> <p>請負者は、教育・訓練計画の概要(対象者、時期、教材、教育者・訓練者の選定</p>	<p>1.9 Health and Safety Education and Training</p> <p>1.9.1 Implementation of education and training</p> <p>The Contractor shall comply with the laws of the Country and, under the guidance of the Health and Safety Officer, conduct education and training for the following Contractor's personnel.</p> <p>(a) Those who newly enter the site and those who are scheduled to change the work</p> <p>(b) Those who are planned to be assigned to a particularly dangerous or harmful work</p> <p>(c) Those who are planned to be appointed as Operation Leaders</p> <p>However, for those who have qualifications issued by the public organization in the Country or who have completed the training provided by the public</p>	

<p>に関する方針等)を安全衛生計画書に含めなければならない。また、教育・訓練の開始前には、その詳細を含んだ安全衛生計画書をエンジニアへ提出しなければならない。</p> <p>なお、教育・訓練は就業時間内に行わなくてはならない。また、教育・訓練に必要な費用は請負者が負担しなければならない。</p> <p>1.9.2 教育訓練の内容</p> <p>(1) 新規入場者及び作業内容の変更が予定される者の教育 請負者は新規入場者及び作業内容の変更が予定される者に対して、それぞれが従事する業務に関する安全及び衛生のため必要な、次の事項を含む教育を行わなければならない。</p> <p>(a) 指揮命令系統とコミュニケーション方法 (b) 機械等、原材料等の危険性又は有害性及びこれらの取扱い方法 (c) 安全装置、有害物抑制装置又は保護具の性能及びこれらの取扱い方法 (d) 作業手順 (e) 作業開始前の点検 (f) 当該業務に関して発生するおそれのある疾病の原因及び予防 (g) 整理、整頓、清潔の保持 (h) 事故・緊急時等における応急措置及び退避 (i) 安全衛生ルール (j) その他、当該業務に関する安全又は衛生のために必要な事項</p> <p>なお、教育事項の全部又は一部に関し十分な知識及び技能を有していると認められる者については、当該事項についての教育を省略することができる。</p> <p>(2) 危険又は有害な業務へ配置予定の者への教育 本仕様書の Annex 2 に掲げる特に危険又は有害な業務に作業員に従事させるときは、当該作業員に、当該作業に関する危険性・有害性に関する知識及び作業方法等、安全衛生のための教育を行わなければならない。 請負者は、Annex 3 に例示する教育内容、本仕様書に規定する各作業の安全上必要な事項、法律及び国際的に認められた規定を参考として、教育科目及び教育時間を決定しなくてはならない。</p> <p>(3) 作業主任に任命が予定されている者への教育 請負者は、1.8.3(2)に規定の作業主任の責務を遂行するために、作業主任の任命に当たり、本仕様書に規定する各作業の安全上必要な事項、法律及び国際的に認められた規定を参考として、当該作業の作業主任のための教育科目及び教育時間を決定し、教育を行わなければならない。 請負者は、Annex 4 に記載の作業に任命する作業主任には、上記(3)の教育に加えて、Annex 5 に例示する教育内容を参考に、教育科目及び教育時間を決定し、教育を行わなければならない。</p> <p>(4) 実地訓練の実施 教育の実施時には、必要に応じ保護具の取り扱いなどの実地訓練も取り入</p>	<p>organization in the Country or other countries, and in addition, if the Contractor judges they have sufficient knowledge and skills, then all or some of the items, education on the items can be omitted.</p> <p>The Contractor shall include in the Health and Safety Plan the outline of the education and training plans (participants, time, teaching materials, policy of selecting educators and trainers). In addition, the Contractor shall submit the Health and Safety Plan which includes the details of the education and training to the Engineer before the start of then.</p> <p>Education and training shall be conducted during working hours and the Contractor shall bear the expenses necessary for education and training.</p> <p>1.9.2 Contents of Education and Training</p> <p>(1) Those who newly enter the site and those who are scheduled to change the work The Contractor shall provide those who newly enter the site and those who are scheduled to change the work with education necessary for health and safety of the work that they are engaged in, including the following matters.</p> <p>(a) Chain of command and communication method for the work (b) Hazard or danger of machineries and raw materials, etc., and methods of handling them (c) Performance and handling methods of safety devices, hazardous substance control devices and protective equipment (d) Work procedure (e) Inspection before start of the work (f) Causes and prevention of diseases that may occur in relation to the work concerned (g) Maintenance of sorting, tidying, cleanliness of the site (h) Emergency measures and evacuation at the time of accident etc. (i) Health and safety rules (j) Other matters necessary for health or safety related to the works concerned</p> <p>However, education about the matter concerned can be omitted for those who are considered to have sufficient knowledge and skills about all or a part of the matter to be taught.</p> <p>(2) Those who are planned to be assigned to a particularly dangerous or harmful work When engaging workers in a particularly dangerous or harmful work listed in Annex 2 of this Specification, the Contractor shall give workers the education regarding danger and harmfulness, work method and health and safety matters concerning the work to be engaged.</p>	
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<p>れなければならない。</p> <p>(5) 教育訓練担当者 教育訓練担当者は、当該国の法律に基づく教育資格を有する請負者の要員又は外部講師とし、法律に規定が無い場合は安全衛生管理者又は請負者が必要となる能力、経験があると認め、エンジニアが同意する者とする。</p> <p>(6) 教育訓練記録 教育訓練を行なったときは、受講者、科目等の記録を作成して保存し、エンジニアの要求のあるときは閲覧に供さなければならない。</p> <p>1.9.3 請負者の要員以外への安全衛生ルールの説明 請負者は、請負者の要員以外で現場に入場を許可された者に対して、必要に応じて現場の安全衛生に関するルールを説明しなければならない。</p>	<p>The Contractor shall determine the subjects and hours with reference to stipulations in this Specification with regard to matters necessary for safety of the works, or referring to Laws or internationally recognized provisions.</p> <p>(3) Those who are planned to be appointed as Operation Leaders In order to fulfill the duties of the Operation Leaders as stipulated in 1.8.3 (2), the Contractor shall provide necessary education prior to appointment of the Operation Leaders with subjects and hours determined with reference to stipulations in this Specification with regard to matters necessary for safety of the works, or referring to Laws or internationally recognized provisions. For the Operation Leader appointed to the work described in Annex 4, in addition to the education described in (3) above, the Contractor shall provide the special education of which subjects and time determined referring to the educational content exemplified in Annex 5.</p> <p>(4) Conduct of on-site training At the time of education, on-site training such as handling of protective equipment shall be taken in as necessary.</p> <p>(5) Education and training personnel Education and training lecturers shall be the Contractor's personnel who are qualified as a lecturer under the laws of the country concerned or external lecturers. In case of absence of such provision in the country concerned, the Health and Safety Officer or personnel whom the Contractor recognizes having necessary ability and experience and the Engineer agrees can become a lecturer.</p> <p>(6) Records of education and training When education and training is conducted, the Contractor shall create and store records of trainees, subjects, etc. and provide them for viewing by the Engineer when required by the Engineer.</p> <p>1.9.3 Explanation of health and safety rules to persons other than the Contractor's personnel The Contractor shall explain health and safety rules of the site, as necessary, to persons other than the Contractor's personnel who are permitted to enter the site.</p>	
<p>Annex 2 特に危険又は有害な作業</p> <p>(1) クレーン、移動式クレーン又はデリック等の揚貨装置の運転作業</p> <p>(2) ガス溶接作業</p> <p>(3) アーク溶接作業</p> <p>(4) フォークリフト運転作業</p> <p>(5) 車両系建設機械(整地・運搬・積込み用及び掘削用)運転作業</p> <p>(6) 車両系建設機械(基礎工事用)運転作業</p> <p>(7) 車両系建設機械(解体用)運転作業</p>	<p>Annex 2 List of Particularly Dangerous or Harmful Work</p> <p>(1) Crane and mobile crane operation or operation of lifting equipment such as derrick</p> <p>(2) Gas welding operation</p> <p>(3) Arc welding operation</p> <p>(4) Forklift operation</p> <p>(5) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging)</p> <p>(6) Vehicle-type construction equipment operation (for foundation work)</p> <p>(7) Vehicle-type construction equipment operation (for demolition work)</p>	

- (8) 不整地運搬車運転作業
- (9) 高所作業車運転作業
- (10) クレーン、移動式クレーン又はデリックの玉掛け作業
- (11) 研削といしの取替え又は取替え時の試運転作業
- (12) 立木の伐木作業
- (13) ボーリングマシンの運転作業
- (14) 動力により駆動される巻上げ機の運転作業
- (15) 建設用リフトの運転作業
- (16) ゴンドラの操作作業
- (17) 酸素欠乏危険場所における作業
- (18) 有機溶剤を使用する作業
- (19) 粉じんのある場所での作業
- (20) ずい道等の掘削作業、ずり、資材等の運搬、覆工コンクリートの打設等の作業
- (21) 自動車用タイヤに空気圧縮機を用いて当該タイヤに空気を充てんする業務
- (22) 足場の組立て、解体又は変更の作業
- (23) 昇降器具を用いて、当該昇降器具により身体を保持しつつ行うロープ高所作業
- (24) 墜落制止用器具のうちフルハーネス型のものを用いて行う作業

- (8) Rough terrain hauler operation
- (9) Areal work platform operation
- (10) Sling work for crane, mobile crane and derrick
- (11) Grinding wheel replacement or commissioning work at the time of replacement
- (12) Tree felling operation
- (13) Boring machine operation
- (14) Power driven hoisting machine operation
- (15) Construction work lift operation
- (16) Suspended work platform operation
- (17) Operation under the dangerous condition of oxygen deficiency
- (18) Operations that use organic solvents
- (19) Operation at a place with dust
- (20) Excavating tunnel, transporting muck and materials, placing lining concrete
- (21) Filling the tires with air using air compressors for automobile tires
- (22) Assembling, dismantling or changing scaffolding
- (23) Rope height work performed with the lifting device
- (24) Work to be performed using a full harness type of fall prevention device

以後は行を再構成して修正

Annex 3 特に危険又は有害な業務の教育内容の例示

(a) 移動式クレーン運転

科目	範囲
1 移動式クレーンに関する知識	種類及び型式、主要構造部分、作動装置、安全装置、ブレーキ機能、取扱い方法、点検及び整備の方法
2 原動機及び電気に関する知識	内燃機関、蒸気機関、油圧駆動装置、感電による危険性
3 移動式クレーンの運転のために必要な力学に関する知識	力(合成、分解、つり合い及びモーメント)、重心、荷重、ワイヤロープ、フック及びつり具の強さ、ワイヤロープの掛け方と荷重との関係
4 実技	移動式クレーンの運転・操作の方法 移動式クレーン運転のための合図

(b) アーク溶接

科目	範囲
1. アーク溶接等に関する知識	アーク溶接等の基礎理論、電気に関する基礎知識
2. アーク溶接装置に関する基礎知識	直流アーク溶接機、交流アーク溶接機、交流アーク溶接機用自動電撃防止装置、溶接棒等及び溶接棒等のホルダー、配線
3. アーク溶接等の作業の方法に関する知識	作業前の点検整備、溶接、溶断等の方法、溶接部の点検、作業後の処置、災害防止
4 実技	アーク溶接等の業務のために使用する設備の取扱い

(c) フォークリフト運転

科目	範囲
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Annex 3 Examples of Educational Contents for Particularly Dangerous or Harmful Works

(a) Mobile crane operation

Subject	Scope
1 Knowledge of mobile cranes	Type and model, main structural parts, operating device, safety device, brake function, handling method, method of inspection and maintenance
2 Knowledge about motor and electricity	Internal combustion engine, steam engine, hydraulic drive, danger from electric shock
3 Knowledge of mechanics necessary for operation of mobile crane	Force (composition, decomposition, balance and moment), center of gravity, load, wire rope, hook and hook strength, relationship between wire rope application and load
4 Practical skill	Method of mobile crane operation Signs for mobile crane operation

(b) Arc welding operation

Subject	Scope
1 Knowledge of arc welding etc.	Basic theory of arc welding, basic knowledge about electricity
2 Basic knowledge on arc welding equipment	DC arc welder, AC arc welder, automatic electric shock prevention device for AC arc welder, welding rod and rod holder, wiring
3 Knowledge of arc welding work methods	Inspection and maintenance before work, methods of welding and cutting, inspection of welds, post-work measures, accident prevention
4 Practical skill	Handling of equipment for arc welding work

(c) Forklift operation

Subject	Scope
1 Knowledge of equipment structure and handling methods for the travel of a forklift.	Structure and method of handling for forklift engine, power transmission device, traveling device, steering device, braking device, auxiliary device for traveling
2 Knowledge of equipment structure and handling	Structure and handling method of hydraulic equipment (including safety valve), head guard, backrest, auxiliary devices for cargo handling, method of inspection

1 フォークリフトの走行に関する装置の構造及び取扱いの方法に関する知識	フォークリフトの原動機、動力伝達装置、走行装置、かじ取り装置、制動装置及び走行に関する附属装置の構造並びにこれらの取扱い方法
2 フォークリフトの荷役に関する装置の構造及び取扱いの方法に関する知識	フォークリフトの荷役装置、油圧装置(安全弁を含む。)、ヘッドガード、バックレスト及び荷役に関する附属装置の構造並びにこれらの取扱い方法、点検及び整備の方法
3 フォークリフトの運転に必要な力学に関する知識	力(合成、分解、つり合い及びモーメント)重量、重心及び物の安定、速度及び加速度、荷重、応力、材料の強さ
4 実技	走行の操作、荷役の操作

(d) 車両系建設機械運転(整地・運搬・積込み用及び掘削用)

科目	範囲
1 走行に関する装置の構造及び取扱いの方法に関する知識	車両系建設機械(整地・運搬・積込み用及び掘削用)の原動機、動力伝達装置、走行装置、操縦装置、ブレーキ、電気装置、警報装置及び走行に関する附属装置の構造及び取扱い方法
2 作業に関する装置の構造、取扱い及び作業方法に関する知識	車両系建設機械(整地・運搬・積込み用及び掘削用)の種類及び用途、作業装置及び作業に関する附属装置の構造及び取扱い方法、車両系建設機械(整地・運搬・積込み用及び掘削用)による一般的作業方法
3 運転に必要な一般的事項に関する知識	車両系建設機械(整地・運搬・積込み用及び掘削用)の運転に必要な力学及び土質工学、土木施工の方法、ワイヤロープ及び補助具、点検及び整備の方法
4 実技	走行の操作、作業のための装置の操作

(e) 車両系建設機械運転(基礎工事用)

科目	範囲
1 走行に関する装置の構造及び取扱いの方法に関する知識	車両系建設機械(基礎工事用)の原動機、動力伝達装置、走行装置、操縦装置、ブレーキ、電気装置、警報装置及び走行に関する附属装置の構造及び取扱い方法
2 作業に関する装置の構造、取扱い及び作業方法に関する知識	車両系建設機械(基礎工事用)の種類及び用途、作業装置及び作業に関する附属装置の構造及び取扱い方法、車両系建設機械(基礎工事用)による一般的作業方法
3 運転に必要な一般的事項に関する知識	車両系建設機械(基礎工事用)の運転に必要な力学及び土質工学、土木施工の方法、ワイヤロープ及び補助具、点検及び整備の方法
4 実技	走行の操作、作業のための装置の操作

(f) 有機溶剤を使用する業務

科目	範囲
1 作業環境管理	有機溶剤蒸気の発散防止対策に係る設備及び換気のための設備並びにそれらの保守、点検の方法、作業環境の状態の把握及び整備
2 作業管理	作業管理の方法、労働衛生保護具
3 健康管理	有機溶剤の種類及び有害性、有機溶剤の使用される業務、有機溶剤による健康障害、その予防方法及び応急措置、健康診断及び事後措置
4 災害事例	災害事例とその防止対策

(g) 玉掛業務

methods for cargo handling	and maintenance
3 Knowledge of mechanics necessary for forklift operation	Force (composition, decomposition, balance and moment) weight, center of gravity and stability of objects, speed and acceleration, load, stress, material strength
4 Practical skill	Operation of traveling, operation of cargo handling

(d) Vehicle-type construction equipment operation (for ground levelling, transportation, loading and digging)

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods motors for vehicle-type construction equipment (for ground levelling, transportation, loading and digging), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for ground levelling, transportation, loading and digging), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance
4 Practical skill	Operation of traveling, operation of equipment for work

(e) Vehicle-type construction equipment operation (for foundation work)

Subject	Scope
1 Knowledge of the structure and handling of the equipment for travel	Structures and handling methods of motors for vehicle-type construction equipment (for foundation work), power transmission devices, travel devices, steering devices, brakes, electrical devices, alarm devices, and auxiliary devices for travel
2 Knowledge of equipment structure, handling and working methods related to work	Types and applications of vehicle-type construction equipment (for foundation work), structures and handling methods of work equipment, auxiliary device and method of general work
3 Knowledge of general matters required for operation	Mechanics and soil engineering required for operation of vehicle-type construction equipment (for foundation work), methods of civil works, wire ropes and auxiliary tool, method of inspection and maintenance
4 Practical skill	Operation of traveling, operation of equipment for work

(f) Operations that use organic solvents

Subject	Scope
1 Work environment management	Method of maintenance and inspection of equipment for venting prevention measures of organic solvent vapor and equipment for ventilation, Grasp and maintain the working environment
2 Work management	Work management method, occupational health protective equipment
3 Health management	Types and hazards of organic solvents, operations using organic solvents, health hazards caused by organic solvents, prevention methods and first-aid measures, medical checkup and follow-up measures
4 Accident case	Accident cases and prevention measures

(g) Sling work

Subject	Scope
1 Knowledge of cranes, mobile cranes and derricks (hereinafter referred to as "cranes etc.")	Type and model, structure and function, safety device and brake
2 Knowledge of mechanics necessary for slinging work	Force (composition, decomposition, balance and moment), center of gravity of simple figures and stability of objects, friction, weight, load
3 Method of slinging	Selection and use of the sling tool, basic work action (including safe operation

科目	範囲
1 クレーン、移動式クレーン及びデリック(以下「クレーン等」という。)に関する知識	種類及び型式、構造及び機能、安全装置及びブレーキ
2 クレーン等の玉掛けに必要な力学に関する知識	力(合成、分解、つり合い及びモーメント)、簡単な図形の重心及び物の安定、摩擦、重量、荷重
3 クレーン等の玉掛けの方法	玉掛用具の選定及び使用の方法、基本動作(安全作業方法を含む。)、合図の方法
4 実技	運転のための合図、クレーン等の玉掛の作業

(h) ロープ高所作業

科目	範囲
1 ロープ高所作業に関する知識	ロープ高所作業の方法
2 メインロープ等に関する知識	メインロープ等の種類、構造、強度及び取扱い方法、メインロープ等の点検及び整備の方法
3 労働災害の防止に関する知識	墜落による労働災害の防止のための措置、安全帯及び保護帽の使用法並びに保守点検の方法
4 実技	ロープ高所作業の方法、メインロープ等の点検

(i) 墜落用制止器具のうちフルハーネス型のものを用いて行う作業

科目	範囲
1 作業に関する知識	作業に用いる設備の種類、構造及び取扱い方法、作業に用いる設備の点検及び整備の方法、作業の方法
2 墜落制止用器具(フルハーネス型のものに限る。以下同じ)に関する知識	墜落制止用器具のフルハーネス及びランヤードの種類及び構造、墜落制止用器具のフルハーネスの装着の方法、墜落制止用器具のランヤードの取付け設備等への取付け方法及び選定方法、墜落制止用器具の点検及び整備の方法、墜落制止用器具の関連器具の使用法
3 労働災害の防止に関する知識	墜落による労働災害の防止のための措置、落下物による危険防止のための措置、感電防止のための措置、保護帽の使用法及び保守点検の方法、事故発生時の措置、その他作業に伴う災害及びその防止方法
4 実技	墜落制止用器具の使用法等

Annex 4 特定の作業の作業主任を任命する作業

- (1) 地山の掘削及び土止め支保工作業
- (2) ずい道等の掘削等作業
- (3) ずい道等の覆工作業
- (4) 型枠支保工の組立て等作業
- (5) 足場の組立て等作業
- (6) 建築物等の鉄骨の組立て等作業
- (7) 鋼橋架設等作業
- (8) コンクリート橋架設等作業
- (9) 採石のための掘削作業

	method), method of signaling
4 Practical skill	Signs for operation, work with a sling for a crane

(h) Rope height work

Subject	Scope
1 Knowledge of rope height work	Method of rope height work
2 Knowledge about main ropes etc.	Types of main ropes, structure, strength and handling methods, methods of inspection and maintenance of main ropes, etc.
3 Knowledge about prevention of occupational accidents	Measures for the prevention of occupational accidents caused by the fall, methods of using, maintaining and inspecting safety belts and protective helmet
4 Practical skill	Method of rope height work, inspection of main rope etc.

(i) Work to be performed using a full harness type of fall prevention equipment

Subject	Scope
1 Work knowledge	Types of equipment used for work, structure and handling methods, methods for inspecting and maintaining equipment used for work, methods of work
2 Knowledge of fall prevention equipment (limited to full harness type, the same shall apply hereinafter)	Types and structures of full harnesses and lanyards for fall prevention equipment, methods for mounting the full harnesses, installation and selection methods for lanyards, methods of inspection and maintenance of fall prevention equipment, how to use the related equipment for fall prevention equipment
3 Knowledge about the prevention of occupational accidents	Measures to prevent occupational accidents due to fall, measures to prevent hazards due to falling objects, measures to prevent electric shock, methods of using protective helmet and methods of maintenance and inspection, and other accident due to work and its preventive measures
4 Practical skill	Method of using fall prevention equipment

Annex 4 Specific Works Requiring to Appoint Operation Leader

- (1) Earth excavation and shoring work
- (2) Tunnel excavation work
- (3) Tunnel lining work
- (4) Form and shoring assembly/demolition work
- (5) Scaffolding assembly/demolition work
- (6) Steel frames assembly work of buildings
- (7) Steel bridge construction work
- (8) Concrete bridge construction work
- (9) Excavation work for quarrying

- (10) 木造建築物の組立て等作業
- (11) 有機溶剤作業
- (12) 酸素欠乏・硫化水素危険作業
- (13) 車両系荷役運搬機械作業
- (14) 車両系建設機械等作業
- (15) 杭打(抜)機又はボーリングマシンの組立て等作業
- (16) 高所作業車作業
- (17) 電気発破作業
- (18) ロープ高所作業
- (19) クレーンの組立て等作業
- (20) 移動式クレーンのジブの組立て等作業
- (21) デリックの組立て等作業

- (10) Wooden building assembly work
- (11) Organic solvent work
- (12) Dangerous work under oxygen deficiency/hydrogen sulfide
- (13) Vehicle-type material handling/transporting equipment work
- (14) Vehicle-type construction equipment work
- (15) Assembling work of pile driver/puller machines or boring machines
- (16) Areal work platform work
- (17) Electric blasting work
- (18) Rope height work
- (19) Assembling work of cranes
- (20) Assembling work of mobile crane jibs
- (21) Assembling work of derrick

Annex 5 特定の作業の作業主任の教育内容の例示

(a) 地山の掘削及び土止め支保工作業の作業主任

科目	範囲
1 作業の方法に関する知識	地山の掘削の方法、浮石、埋設物等の処理、湧(ゆう)水の処理及び排水の方法、法(のり)面防護の方法、土砂及び岩石の性質、土止め支保工の種類、材料、構造、組立図、点検及び補修、土止め支保工の切りばり、腹おこし等の取付け及び取りはずしの作業に関する事項
2 工事中設備、機械、器具等に関する知識	工事中設備及び機械の取扱い、電気及び内燃機関、器具及び工具、服装及び保護具
3 作業環境、安全等に関する知識	有害ガス、崩壊の予知、危険防止のための措置、作業標準、事故発生時における措置

(b) ずい道等の掘削等作業の作業主任

科目	範囲
1 作業の方法に関する知識	ずい道等の掘削の方法、ずり積みの方法、ずい道支保工の種類及び構造、ずい道支保工の組立ての方法、ロックボルトの取付けの方法等
2 工事中設備、機械、器具等に関する知識	工事中設備及び機械の取扱い、電気及び内燃機関、器具及び工具、危険防止のための措置等
3 作業環境、安全等に関する知識	有害ガス及び可燃性ガス、作業標準、事故発生時における措置等

(c) ずい道等の覆工作業の作業主任

科目	範囲
1 作業の方法に関する知識	ずい道型わく支保工の種類、材料、構造、組立図、点検及び補修、ずい道型わく支保工の組立て及び解体の作業の方法
2 工事中設備、機械、器具等に関する知識	工事中設備及び機械の取扱い、器具及び工具、服装及び保護具、危険防止のための措置
3 作業環境、安全等に関する知識	作業標準、事故発生時における措置等

(d) 採石のための掘削作業の作業主任

科目	範囲
1 岩石の種類、岩石の採取のための掘削の方法等に関する知識	岩石の種類、岩石の採取のための掘削の方法、浮石の処理、湧水の処理及び排水の方法、法面防護の方法、土砂及び岩石の性質

Annex 5 Example of Educational Contents for Operation Leader for Specific Works

(a) Operation leader for earth excavation and shoring work

Subject	Scope
1 Knowledge of work method	Method of ground excavation, treatment of loose rocks and buried objects, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock, and the type, material, structure, assembly drawing, maintenance and inspection of earth shoring, matters related to installation and removal of strut and wailing
2 Knowledge of construction equipment, machines, instruments etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, clothing and protective equipment
3 Knowledge about work environment, safety measures etc.	Harmful gases, collapse prediction, measures for preventing hazards, work standards, measures at the time of disaster occurrence

(b) Operation leader for tunnel excavation work

Subject	Scope
1 Knowledge of work method	Method of tunnel excavation, mucking, and types, structure and method of assembling of tunnel support, method of installing rock bolts
2 Knowledge of construction equipment, machines, instruments etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools
3 Knowledge about work environment, safety measures etc.	Harmful gases and toxic gases, measures for preventing hazards, work standards, measures at the time of disaster occurrence

(c) Operation leader for tunnel lining work

Subject	Scope
1 Knowledge of work method	Types, materials, structure and assembling drawings, inspection and repair of tunnel support, method of assembling and dismantling tunnel support
2 Knowledge of construction equipment, machines, instruments etc.	Handling of construction equipment and machinery, instruments and tools, clothing and protective equipment
3 Knowledge about work environment, safety measures etc.	Measures for preventing hazards, work standards, measures at the time of disaster occurrence

(d) Operation leader for excavation work for quarrying

Subject	Scope
1 Knowledge of rock types, drilling	Types of rock, method of excavation for extraction of rock, treatment

2 工事中設備、機械、器具等に関する知識	工事中設備及び機械の取扱い、電気及び内燃機関、器具及び工具、服装及び保護具、危険防止のための措置
3 作業環境、安全等に関する知識	有害ガス、崩壊予知、作業標準、事故発生時における措置

(e) 型枠支保工の組立て等作業の作業主任

科目	範囲
1 作業の方法に関する知識	型枠及び型枠支保工の種類及び材料、型枠支保工の構造、組立図、点検等、型枠及び型枠支保工の組立て及び解体の作業の方法、悪天候時における作業の方法
2 工事中設備、機械、器具等に関する知識	工事中設備及び機械の取扱い、器具及び工具、電気、墜落防止及び落下物防護のための設備、服装及び保護具、危険防止のための措置
3 作業環境、安全等に関する知識	作業標準、事故発生時における措置

(f) 足場の組立て等作業の作業主任

科目	範囲
1 作業の方法に関する知識	足場の種類、材料、構造及び組立図、足場の組立て、解体及び変更の作業の方法、点検及び補修、登りさん橋、朝顔等の構造並びにこれらの組立て、解体及び変更の作業の方法に関する事項、悪天候時における作業の方法
2 工事中設備、機械、器具等に関する知識	工事中設備及び機械の取扱い、器具及び工具、電気、墜落防止のための設備、落下物による危険防止のための措置、服装及び保護具
3 作業環境、安全等に関する知識	作業標準、事故発生時における措置

(g) 建築物等の鉄骨の組立て等作業の作業主任

科目	範囲
1 作業の方法に関する知識	建築物及び塔の種類、材料、構造、設計図及び工作図、建築物等の鉄骨の組立て等の作業の方法、点検、悪天候時における作業の方法
2 工事中設備、機械、器具等に関する知識	工事中設備及び機械の取扱い、器具及び工具、電気、墜落防止のための設備、落下物による危険防止のための措置、服装及び保護具
3 作業環境、安全等に関する知識	作業標準、事故発生時における措置

(h) 鋼橋架設等作業の作業主任

科目	範囲
1 作業の方法に関する知識	橋梁の種類、材料、構造、設計図及び工作図、工法の種類及び作業の方法、架設等に係る点検の方法
2 工事中設備、機械、器具等に関する知識	工事中設備及び機械の取扱い、器具及び工具、電気、墜落防止のための設備、落下物による危険防止のための措置、悪天候時における作業の方法、服装及び保護具
3 作業環境、安全等に関する知識	作業標準、事故発生時における措置

(i) 木造建築物の組立て等作業の作業主任

科目	範囲
1 木造建築物の構造部材の組立て、屋根下地の取付け等に関する知識	軸組み、小屋組み、床組み、枠組壁等の主要構造部分の工法、屋根及び外壁下地の工法、継手及び仕口の工法、建て方作業の方法及び順序、軸組み等の補強方法
2 工事中設備、機械、器具等に関する知識	工事中設備及び機械の取扱い、器具及び工具、電気、墜落防止のための設備、落下物による危険防止のための措置、服装の及び保護具

methods for rock excavation, etc.	of loose rock, method of treatment and drainage of spring water, method of slope protection, nature of soil and rock
2 Knowledge of construction equipment, machines, instruments etc.	Handling of construction equipment and machinery, electricity and internal combustion engines, instruments and tools, clothing and protective equipment
3 Knowledge about work environment, safety measures etc.	Harmful gases, measures for preventing hazards, collapse prediction, work standards, measures at the time of disaster occurrence

(e) Operation leader for form and shoring assembly/demolition work

Subject	Scope
1 Knowledge of work method	Types and materials of form and form shoring, structure of form shoring, assembly drawings, inspection, etc. Methods of assembly and dismantling of form and frame shoring
2 Knowledge of construction equipment, machines, instruments etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, clothing and protective equipment
3 Knowledge about work environment, safety measures etc.	Measures for preventing danger, methods of work in adverse weather, work standards, measures at the time of disaster occurrence

(f) Operation leader for scaffolding assembly/demolition work

Subject	Scope
1 Knowledge of work method	Types of scaffolds, materials, structures and assembly drawings, methods of scaffold assembly, disassembly and change of work, inspections and repairs. Matters of structures and methods assembly, disassembly and changes of climbing bridges, protective shelf, etc.
2 Knowledge of construction equipment, machines, instruments etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment and facilities for preventing fall and protecting from fall objects, clothing and protective equipment
3 Knowledge about work environment, safety measures etc.	Measures for preventing danger, methods of work in adverse weather, work standards, measures at the time of disaster occurrence

(g) Operation leader for steel frames assembly work of buildings

Subject	Scope
1 Knowledge of work method	Types of buildings and towers, materials, structures, design drawings, shop drawings, equipment and tools, methods of work for assembling steel frames of buildings, etc., inspection
2 Knowledge of construction equipment, machines, instruments etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment for fall prevention, measures to prevent hazards from falling objects, clothing and protective equipment,
3 Knowledge about work environment, safety measures etc.	Methods of work in adverse weather, work standards, measures at the time of disaster occurrence

(h) Operation leader for steel bridge construction work

Subject	Scope
1 Knowledge of work method	Types of bridges, materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity, equipment for fall prevention, clothing and protective equipment
3 Knowledge about work environment, safety measures etc.	Measures to prevent hazards from falling objects, methods of work in adverse weather, work standards, measures at the time of disaster occurrence

(i) Operation leader for wooden building assembly work

Subject	Scope
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3 作業環境、安全等に関する知識	作業標準、事故発生時における措置
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(j) コンクリート橋架設等作業の作業主任

科目	範囲
1 作業の方法に関する知識	橋梁の種類、材料、構造、設計図及び工作図、工法の種類及び作業の方法、架設等に係る点検の方法、悪天候時における作業の方法
2 工事用設備、機械、器具等に関する知識	工事用設備及び機械の取扱い、器具及び工具、電気、墜落防止のための設備、落下物による危険防止のための措置、服装及び保護具
3 作業環境、安全等に関する知識	作業標準、事故発生時における措置

(k) 有機溶剤作業の作業主任

科目	範囲
1 健康障害及びその予防措置に関する知識	有機溶剤による健康障害の病理、症状、予防方法及び応急措置
2 作業環境の改善方法に関する知識	有機溶剤の性質、有機溶剤の製造及び取扱いに係る器具その他の設備の管理、作業環境の評価及び改善の方法
3 保護具に関する知識	有機溶剤の製造又は取扱いに係る保護具の種類、性能、使用方法及び管理

(l) 酸素欠乏・硫化水素危険作業の作業主任

科目	範囲
1 危険の発生原因と救急そ生に関する知識	酸素欠乏及び硫化水素の発生の原因及び防止措置に関する知識 酸素欠乏症、硫化水素中毒及び救急そ生に関する知識
2 保護具に関する知識	酸素欠乏等の保護具の種類、性能、使用方法及び管理
3 作業及び救急措置に関する実技	酸素及び硫化水素の濃度の測定方法、救急そ生の方法

1 Knowledge about assembling structural members of wooden buildings, installing roof bed, etc.	Construction methods of main structural parts such as frame, cabin, floor structure, framed walls, construction methods of roof and outer wall foundation, joints, order of construction, reinforcement method for frame
2 Knowledge of construction equipment, machines, instruments etc.	Equipment for fall prevention, measures to prevent hazards from falling objects, clothing and protective equipment
3 Knowledge about work environment, safety measures etc.	Methods of work in adverse weather, work standards, measures at the time of disaster occurrence

(j) Operation leader for concrete bridge construction work

Subject	Scope
1 Knowledge of work method	Types of bridges, materials, structures, design drawings and shop drawings, types of construction methods and methods of work, methods of inspection pertaining to erection, etc.
2 Knowledge of construction equipment, machines, instruments, work environment, etc.	Handling of construction equipment and machinery, equipment and tools, electricity equipment for fall prevention, measures to prevent hazards from falling objects, clothing and protective equipment,
3 Knowledge about work environment, safety measures etc.	Methods of work in adverse weather, work standards, measures at the time of disaster occurrence

(k) Operation leader for organic solvent work

Subject	Scope
1 Knowledge of health hazards and their preventive measures.	Pathology, symptoms, prevention methods and first-aid measures of health problems caused by organic solvents
2 Knowledge for improving the work environment	Properties of organic solvents, management of equipment and other facilities related to production and handling of organic solvents, methods of evaluation and improvement of working environment
3 Knowledge of protective equipment	Type, performance, method of use and management of protective equipment pertaining to the production or handling of organic solvents

(l) Dangerous work under oxygen deficiency/hydrogen sulfide

Subject	Scope
1 Knowledge about the cause of danger and resuscitation	Knowledge of the causes of oxygen deficiency and hydrogen sulfide and preventive measures, Knowledge of hypoxia, hydrogen sulfide poisoning and resuscitation
2 Knowledge about protective equipment	Types, performance, usage and management of protective equipment for oxygen deficiency etc.
3 Practical skills related to work and emergency therapeutic measures	Measuring method of oxygen and hydrogen sulfide concentration, emergency resuscitation method



JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE ODA



***Japan International Cooperation Agency
(JICA)***

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JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:

1) Japanese Acts, Orders and Ordinances including:

- Industrial Safety and Health Act*
- Order for Enforcement of Industrial Safety and Health Act*
- Ordinance on Industrial Safety and Health*
- Safety Ordinance for Cranes*
- Ordinance on Safety and Health of Work under High Pressure*
- Ordinance on Prevention of Anoxia, etc.*
- Ordinance on Prevention of Hazards Due to Dust*
- Explosives Control Act*
- Order for Enforcement of Explosives Control Act*
- Ordinance on Explosives Control*

2) OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.

3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.

(Suggested First aid qualification in Section 2.9):

4) The International Red Cross and Red Crescent Movement

5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)

Suggestion for JICA:

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JICA STANDARD SAFETY SPECIFICATION (JSSS)

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Draft
Requires further
coordination

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JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

1.1 Safety Declaration

- 1.1.1. Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.
- 1.1.2. A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [*Additional Contractor Forms*], Form JSSS/BSD - Bidder’s Safety Declaration,

1.2 General Reference Notes

- 1.2.1. For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [*Definitions and Abbreviations*].
- 1.2.2. The following further general reference notes apply to the content of JSSS:
 - (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
 - (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
 - (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
 - (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
 - (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an equivalent diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.
 - (6) Any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer’s Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Works are being executed.
 - (7) Any reference in JSSS to “relevant authority” or “relevant authorities” shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.
 - (8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

- 1.3.1. JSSS shall form a part of the Project Safety Specification which in turn forms a part of the Specification as illustrated in Annex 1.4: [*Figures and Illustrations*], Fig A1.4.1 [*Incorporation of JSSS in Bid and Contract Documents*].
- 1.3.2. The priorities of the document comprising the Specification are as follows:
 - (1) Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS,
 - (2) The “Project Safety Specification” shall have priority over other parts of the Technical Specification in respect of health and safety matters.
- 1.3.3. The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.

1.4 Compliance with JSSS and Other Regulations

- 1.4.1. JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.
- 1.4.2. JSSS shall not limit the Contractor’s statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.
- 1.4.3. The Contractor shall comply fully with the requirements of JSSS as supplemented and modified by the Particular Safety Specification.
- 1.4.4. Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer’s Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.
- 1.4.5. Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply.
- 1.4.6. If there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer’s consent.
- 1.4.7. Specified Standards and Regulations:
 - (1) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.
 - (2) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.
- 1.4.8. Where there is any reference to OSHA and unless otherwise evident from the text, the words “team leader”, “on-site supervisor”, “on-site supervision”, “field superintendent”, “work chief” and the like shall be collectively construed as reference to the appropriate member of the Contractor’s Personnel, any reference to the “safety and health manager of the Contractor” and the like shall be construed as reference to the HSO and “The construction plan and safety and health plan”, shall be construed as the “Safety Plan”.

- 1.4.9. If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:
- (1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.
 - (2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear.
- 1.4.10. Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion, during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification.
- 1.4.11. The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.

1.5 Contractor's Safety Management System

- 1.5.1. The Contractor shall institute a health and safety management system in accordance with OHSAS 18001 or ISO 45001:2018.
- 1.5.2. The Contractor shall state the applicable standard in the Contractor's Safety Plan.
- 1.5.3. The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.

1.6 Checking and Validation of Submissions

- 1.6.1. In accordance with GC 4.9 [*Quality Assurance*] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination, design and supervision staff and any independent checkers as appropriate.
- 1.6.2. For the purposes of interpretation for JSSS, the final paragraph of GC 1.8 [*Care and Supply of Documents*] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible.

1.7 Contractor's Safety Plans

- 1.7.1. The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.
- 1.7.2. The Safety Plans shall set out or refer to all the health and safety requirements:
- (1) that are stated in JSSS;
 - (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and
 - (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Works are being executed.

- 1.7.3. The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:
- (1) Bid Stage Safety Plan (Outline Overall Safety Plan).
 - (2) Commencement Stage Safety Plan (Updated Overall Safety Plan)
 - (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works)
- 1.7.4. The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level throughout the Time for Completion of the Works.
- 1.7.5. Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility and at any time throughout the Time for Completion of the Works.
- 1.7.6. Bid Stage Safety Plan:
- (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [*Content of Bid Stage Safety Plan*].
 - (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated.
- 1.7.7. Commencement Stage Safety Plan
- (1) This shall be submitted within twenty-eight (28) days of the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site,
 - (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.
 - (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.
- 1.7.8. Particular Safety Plans
- (1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.
 - (2) Whenever required by the Engineer, the Contractor shall, submit Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.
 - (3) Requirements for submission by Contractor and response (if any) by the Engineer to Particular Safety Plans, shall be as follows:
 - (a) The Engineer may review the Particular Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;

- (b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and
 - (c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.
- 1.7.9. The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.
- 1.7.10. Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.
- 1.7.11. The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.

1.8 Risk Assessment

- 1.8.1. In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.
- 1.8.2. The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed of all hazards and risks on the Site.
- 1.8.3. The procedural flow of risk assessment shall be as follows.
- (1) Identifying hazards.
 - (2) Evaluating risks.
 - (3) Determining measures of risk reduction or elimination.
- 1.8.4. The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:
- (1) Removal of hazards such as eliminating dangerous methods of construction.
 - (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
 - (3) Engineering measures.
 - (4) Management measures including improving skills with additional training.
 - (5) Use of PPE or improved PPE.

1.9 Contractor's Method Statements

- 1.9.1. The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.
- 1.9.2. Method Statements shall include details of all Permanent Works and Temporary Works with supporting documents such as:
- (1) Design studies and reports.

- (2) Structural calculations and any other calculations.
 - (3) Specifications and technical details.
 - (4) Proposed construction procedure, sequence and method.
 - (5) Construction resources including labour and Contractor's Equipment.
 - (6) Inspection and monitoring plan.
- 1.9.3. The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.
- 1.9.4. Whenever required by the Engineer, the Contractor shall, submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.

Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:

- (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.
- (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.
- (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.
- (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.
- (5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer for his information.

1.10 Engineer's Safety Representative

- 1.10.1. Unless otherwise specified in the Particular Safety Specification, the Engineer's delegated representative at the Site shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS.
- 1.10.2. The terms of the appointment shall be in accordance with GC 3.2 [*Delegation by the Engineer*].
- 1.10.3. Whenever the term "Engineer" is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.

1.11 Safety Compliance Instructions from the Engineer

- 1.11.1. Without affecting or diminishing the Contractor's responsibility under GC 4.1 [*Contractor's General Obligations*] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the

Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.

- 1.11.2. If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [Suspension of Work] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.
- 1.11.3. If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [Suspension of Work] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer's consent and implemented such measures to ensure that no such accident can reoccur.
- 1.11.4. The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.12 Health and Safety Officer at the Site (HSO)

1.12.1. For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7[*Health and Safety*], shall be construed as "Health and Safety Officer at the Site".

1.12.2. Requirements for the HSO:

- (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.
- (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [*Contractor's Personnel*], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [*Health and Safety*].
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [*Law and Language*], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an alternative and equivalent internationally recognised qualification covering health and safety and risk management, minimum ten (10) years' work experience in construction of which minimum four (4) years shall be in health and safety

management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country), and whom the Contractor considers is qualified to perform the duties subject also to receiving the consent of the Engineer.

1.12.3. Supporting Staff

- (1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.
- (2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.
- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) The HSO shall be expected to develop internal procedures whereby all supporting personnel, shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.
- (6) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

1.12.4. Inspections

- (1) The HSO shall be responsible for ensuring:
 - (a) That all working areas of the Site are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;
 - (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and
 - (c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.11 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*].
- (2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.

1.13 HSO - Scope of Duties

- 1.13.1. The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.
- 1.13.2. The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:
- (1) Health and Safety Management Work:
 - (a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;
 - (d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;
 - (e) Temporarily stopping the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.11 [*Safety Compliance Instructions from the Engineer*];
 - (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
 - (g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;
 - (h) Appointment of further supporting personnel (refer to 1.12.3 [*Supporting Staff*]);
 - (i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;
 - (j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;
 - (k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;
 - (l) Planning and implementation of various training and education implementation plans;
 - (m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;
 - (n) Preparing regular internal and external reports on health and safety activities; and
 - (o) Hazard prediction activity.

1.14 Procedure for Resuming the Works

- 1.14.1. If the Engineer has issued an instruction under JSSS 1.11 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [*HSO – Scope of Duties*] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:
- (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.

- (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within fourteen (14) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving seven (7) days' notice in writing of the resumption date.

To be proactive, the Engineer may give consent at any stage within the above stated time scales.
- (5) The Contractor resumes the Works or part of the Works on the due date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1. The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2. In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

- (1) Overall Safety Management Activities:
 - (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM);
 - (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and
 - (c) Monitoring the implementation of the Safety Plan.
- (2) Safety Management of Contractor's Personnel:
 - (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM;
 - (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures;
 - (c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as:

5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
 - (d) Instruction and management of safety education and training;
 - (e) Instruction and management of all safety measures; and
 - (f) Joint Site Safety Inspections.

1.16 Joint Site Safety Inspections

- 1.16.1. In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.
- 1.16.2. Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.16.3. Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.16.4. The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.
- 1.16.5. The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.17 Compliance Monitoring and Auditing

- 1.17.1. The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured and that such compliance is monitored efficiently and transparently at all times, for which purpose the Contractor shall:
 - (1) Create checklists for monitoring.
 - (2) Carry out regular and random inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents.
 - (4) Create storage and filing systems for the monitoring records.
 - (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer.
- 1.17.2. Safety inspections, are intended to search for risks and hazards, which present a threat to safe working.
- 1.17.3. The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:
 - (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
 - (2) Are the Safety Plan requirements being met?
 - (3) Is there documented proof of compliance?
 - (4) Is health and safety training effective?
 - (5) Is the Contractor's health and safety management system working effectively?
- 1.17.4. The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.
- 1.17.5. The audit team procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer. Unless otherwise consented to by the Engineer, the audit shall be headed by a senior member of the Contractor's head office health and safety team.
- 1.17.6. If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.
- 1.17.7. The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.
- 1.17.8. The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.

- 1.17.9. The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems; they shall not replace the regular health and safety inspections.
- 1.17.10. The audits shall be conducted on a random basis at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.
- 1.17.11. The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor.
- 1.17.12. Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.
- 1.17.13. An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.
- 1.17.14. The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.18 Proper Placement of Contractor's Personnel

- 1.18.1. To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.
- 1.18.2. In compliance with GC 6.9 [*Contractor's Personnel*], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct, PPE, tools, equipment and safety equipment.
- 1.18.3. Labourers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.
- 1.18.4. The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.
- 1.18.5. The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.
- 1.18.6. The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.
- 1.18.7. Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:
 - (1) Work content and work environment.
 - (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability.
 - (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.

- (4) Allocation of an achievable and safe work volume and time.
 - (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].
- 1.18.8. If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.
- 1.18.9. The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.
- 1.18.10. The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that he resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.

1.19 Safety Training Generally

- 1.19.1. The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.
- 1.19.2. The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.
- 1.19.3. Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.

1.20 Safety Induction Training

- 1.20.1. Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom he is responsible, including the Employer's Personnel and all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed at the request of the Employer or Engineer.
- 1.20.2. The following subjects shall be covered:
- (1) Responsible persons, chain of command and means of communication.
 - (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
 - (3) Working procedures generally.
 - (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.
 - (5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. (Refer to separate requirements for special training).
 - (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.

- (7) Maintaining all working areas in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.
- (9) Firefighting; actions, precautions and control.
- (10) Health and safety rules.
- (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

1.20.3. Practical on-Site demonstrations shall be included.

1.20.4. Training Personnel

- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
- (2) All trainers shall be fluent in the language of the persons to be trained.
- (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.

1.20.5. Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.21 Skill Training

1.21.1. The Contractor is reminded of his obligations under GC 6.9 [*Contractor's Personnel*] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.

1.21.2. The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects.

Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.

This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion.

Unless otherwise specified in the Particular Safety Specification and without limiting the

Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply:

- (1) To compliment this OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to provide basic skill training to develop the ability of local counterpart trainee operation leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots.
- (2) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.

The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

Details of such training shall be submitted with the Bid Stage Safety Plan.

- 1.21.3. Subject to receiving the consent of the Engineer, the Contractor may demobilise the imported resources on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.
- 1.21.4. It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice in based upon capability accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.
- 1.21.5. Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [*Contractor's Personnel*]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.
- 1.21.6. Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

1.22 Dangerous Work

- 1.22.1. Particular care shall be taken by the Contractor when performing any Dangerous Work.
- 1.22.2. Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.
- 1.22.3. The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [*Permit System*] that is to be worn conspicuously and be available for validation by the Engineer.
- 1.22.4. A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.
- 1.22.5. The Contractor shall select, train and equip a specialist rescue team or teams of selected workers at the Site, who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on

Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue.

- 1.22.6. Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.
- 1.22.7. The requirement for rescue teams and rescue equipment shall be specified in the Particular Safety Specification.
- 1.22.8. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.
- 1.22.9. The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.
- 1.22.10. Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.
- 1.22.11. For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [*Prohibition of Entry – Dangerous Work*].
- 1.22.12. Hazardous Substances.
 - (1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialist Subcontractor(s) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.
 - (2) The Contractor shall obtain the Engineer's consent for such specialist Subcontractors and their detailed Safety Plans and Method Statements shall also be submitted to the Engineer in accordance with JSSS 1.7 [*Contractor's Safety Plans*] and JSSS 1.9 [*Contractor's Method Statements*].

1.23 Permit to Work System

1.23.1. The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.

1.23.2. The system shall be designed to control safety for all types of high-risk work likely to be encountered, including for example:

- (1) Dangerous Work.
- (2) Work in elevated positions, for example, ladders and scaffolding, roof or ceiling work.
- (3) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.
- (4) Diving Works.

1.23.3. The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.

1.23.4. Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.

1.23.5. The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

- 1.24.1. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed.
- 1.24.2. The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.
- 1.24.3. Unless otherwise specified in the Particular Safety Specification, medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed.
- 1.24.4. The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.
- 1.24.5. Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example include:
 - (1) Medical staff to be assigned at the Site.
 - (2) Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.
 - (3) Emergency medivac services where necessary.
 - (4) Medical Facilities on the Site together with description of equipment and consumables.in
 - (5) Temporary water and power supply to maintain use during mains supply failure.
 - (6) Type of communication facilities and measures for emergency response.
 - (7) Deployment of appropriate first aid appliances, aids, instruments and medicines.
 - (8) First aid training, appointment of first aiders and dissemination of information.
- 1.24.6. Where the Works include the following for example, the Contractor shall train selected Contractor's Personnel to perform rescue operations in a safe manner in the event of any accident:
 - (1) Work on or near existing electrical equipment, cables, wiring, services and systems.
 - (2) Dangerous Work.
 - (3) Diving Work.
 - (4) Similar special circumstances.
- 1.24.7. All rescue team members in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [*Personal Protective Equipment (PPE) and First Aid Equipment*].
- 1.24.8. Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [*Personal Protective Equipment (PPE) and First aid Equipment*].

1.1 Measures at the Time Accidents Occur

- 1.25.1. When an accident occurs, the HSO shall immediately discontinue the concerned work and take all efforts to:
- (1) Safely locate and extract casualties.
 - (2) Provide first aid treatment at the Site.
 - (3) Implement Secondary accident prevention activities, including:
 - (a) Preserving the accident site, make safe and prevent anyone interfering or entering;
 - (b) Discontinuing construction work related to or in the vicinity of the accident; and
 - (c) Implementing any further measures instructed by the Engineer.
- 1.25.2. Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.
- (1) The Contractor shall inform the Engineer and submit details of any accident.
 - (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
 - (3) The Accident Report shall include details of the HSO's recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [*Additional Contractor Forms*].
- 1.25.3. For resumption of work procedures, refer to JSSS 1.14 [*Procedure for Resuming the Works*].

1.2 Emergency Response Plan

- 1.26.1. To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and as far as reasonably possible, shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.

The Contractor shall take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have reasonably avoided or overcome or lessened the effects.

- 1.26.2. The Contractor shall keep all areas of the Site, all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, free from surface water and ground water at all times and by whatever means are necessary to ensure:
- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
 - (2) The safety and stability of the Works and Goods.
 - (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.
- 1.26.3. Where, due to the location of the Site, there is a risk of earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage and flooding arising from such earthquake or volcanic activity.

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed and to any third parties and neighbours and property not connected with the Works but potentially affected thereby.
- (2) Provision of temporary support to all sides and soffits of excavations or tunnelling of sufficient strength, durability and suitability.
- (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.26.4. Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*] and JSSS 1.9 [*Contractor's Method Statements*].

1.26.5. Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract.

1.26.6. The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency,
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels,

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

1.26.7. The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.

- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.26.8. Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.26.9. If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.26.10. The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.

1.26.11. For further measures and requirements refer to JSSS 2.7 [*Adverse Weather Requirements*].

1.3 Contractor's Safety Committee and Regular Safety Meetings

1.27.1. The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.27.2. Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of Contractor's Personnel.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.27.3. The HSO shall be the chairman of the Safety Committee.

1.27.4. The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;

- (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence;
- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (f) Safety instructions received from the Engineer;
- (g) Items to be coordinated with police, fire department and other related organisations;
- (h) Compliance and registration requirements under the Laws of the Country;
- (i) Safety and health awards, media attention and the like; and
- (j) Other matters.

1.27.5. Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.4 Engineer's Regular Safety Meetings

1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries and measures to prevent any reoccurrence;
 - (d) Hazards, safety and health problems identified by any members of the Safety Committee;
 - (e) Status of resolution of previous problems;
 - (f) Items to be coordinated with police, fire department and other related organisations;
 - (g) Compliance and registration requirements under the Laws of the Country; and
 - (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.

- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.
- (5) The Engineer shall issue a formal instruction for any variation requests.

1.5 Project Safety Committee

- 1.29.1. On larger Projects with multiple contract packages and contractors and if so stated in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.
- 1.29.2. Unless otherwise agreed, the members of the Project Safety Committee shall include:
 - (1) The Employer.
 - (2) The Engineer(s).
 - (3) The Contractor's Representative(s).
 - (4) Health and Safety Officers of all members.
- 1.29.3. The Chairman of the Safety Committee shall be the Employer.
- 1.29.4. The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.
- 1.29.5. The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

1.6 Health and Safety Coordination with Other Contractors

- 1.30.1. Refer to GC 2.3 [*Employer's Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:
 - (1) the Employer's Personnel,
 - (2) any other contractors employed by the Employer,
 - (3) the personnel of any legally constituted public authorities,... who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] and GC 4.18 [*Protection of the Environment*].

The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.

When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.

- 1.30.2. The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.
- 1.30.3. If any other contractors are employed by the Employer or if any legally constituted public authorities responsible to the Employer is working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:
- (1) Frequency of the meetings: as and when considered necessary by Engineer.
 - (2) Unless otherwise agreed, attendees shall include representatives of:
 - (a) The Employer;
 - (b) The Contractor;
 - (c) Other contractors employed by the Employer; and
 - (d) Personnel of any legally constituted public authorities.
 - (3) Agenda should relate to coordination among different contractors including for example:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;
 - (c) Accidents, injuries and measures to prevent any reoccurrence;
 - (d) Status of resolution of previous problems;
 - (e) Items to be coordinated with police, fire department and other related organisations;
 - (f) Compliance and registration requirements under the Laws of the Country;
 - (g) Safety and health awards, media attention and the like; and
 - (h) Other matters.
- 1.30.4. Report on the Health and Safety Coordination Meetings:
- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
 - (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
 - (3) A further copy shall be included in the Engineer's monthly progress report.

1.7 Safety Statistics

- 1.31.1. The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.
- 1.31.2. Actual statistics shall include the following:
- (1) Accident: description, casualties, location, time, type and cause.
 - (2) Near-miss: description, casualties, location, time, type and cause.
 - (3) Lost-time: lost hours of casualties, duration of discontinuation.
 - (4) Remedial measures taken.

- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff.
- (9) Number of Contractor's safety meetings and frequency.
- (10) Number of candidates given safety induction and other training.
- (11) Number of safety inspections,
- (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (13) Instructions issued for unsafe behaviour or unsafe site conditions.
- (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (15) Engineer's Instructions issued for work suspension.
- (16) HSO instructions issued for work stoppage.
- (17) Others.

1.31.3. All data shall be in a format and content given consent by the Engineer.

1.31.4. The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.31.5. The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.8 [*Safety Reports*].

1.8 Safety Reports

1.32.1. The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, improvement.
- (2) Contractor/HSO and Joint Site Safety Inspections.
- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [*Progress Reports*].

1.9 Health and Safety Records

1.33.1. The Contractor shall keep health and safety records for the following:

- (1) Accidents, fatalities, near-misses.
- (2) Inspection records and checklists.
- (3) Meetings for safety and health management.
- (4) Monitoring of safety and health management activities.
- (5) Health and safety education and training for the Contractor's Personnel.
- (6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.

- (7) Work environment records and other records required by JSSS Chapter 2 [*General Safety Measures*] and other parts of JSSS.

1.33.2. All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.

1.33.3. A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.8 [*Safety Reports*].

1.10 Health and Safety Incentive Schemes

1.34.1. The Contractor shall consistently enforce legitimate work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.

1.34.2. It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.

1.34.3. It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.

1.34.4. Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.

1.34.5. Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.

1.34.6. The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.

1.34.7. As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.

1.34.8. The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.8 [*Safety Reports*].

1.11 Contractor's Equipment, Temporary Works, Safety Equipment and PPE

1.35.1. Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

1.35.2. The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO (or his delegated and technically qualified assistant) at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and

weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being **safe for use**.

If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as **not being safe for use**, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

1.35.3. The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor.

If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.35.4. As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

- (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.
- (2) New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.

Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment by an independent testing, inspection and certification agency to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.

1.12 Health Matters

1.36.1. The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.36.2. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed.

1.36.3. Occupational health care shall be provided by the Contractor and shall include for example:

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [*Working Environment*]).
 - (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
 - (3) Frequent or excessive manual handling of loads, stress and fatigue.
 - (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability.
- 1.36.4. The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:
- (1) Health care staff to be assigned at the Site.
 - (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
 - (3) Healthcare services to be provided including lectures and education on health matters.
 - (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
 - (5) Occupational Healthcare proposal.
 - (6) Temporary water and power supply to maintain use during mains supply failure.
 - (7) Type of communication facilities and measures for emergency response.
- 1.36.5. Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed.
- 1.36.6. Report of Serious Illness
- (1) The Contractor shall inform the Engineer and submit details of any serious illness.
 - (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.
 - (3) The report shall include details of the HSO's recommended counter-measures.
 - (4) The Engineer is to be consulted on the types of illness for which reports are to be informed.

1.13 Design and Management of Temporary Works

- 1.37.1. Unless otherwise specified in the Particular Safety Specification, Bidders are required to comply with BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.
- 1.37.2. An alternative standard is acceptable by reference to JSSS 1.4.7 [*Specified Standards and Regulations*] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works including Class A Falsework.
- 1.37.3. It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.
- 1.37.4. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.

- 1.37.5. The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.
- 1.37.6. Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].
- 1.37.7. Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [*Contractor's Method Statements*]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer has no obligation under the Contract to review Temporary Works design, however he may choose to do so for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975. The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [*Engineer's Duties and Authority*] Sub-Subclause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.

- 1.37.8. Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:
- (1) Appointment of appropriately qualified and experienced staff.
 - (2) Preparation of adequate Temporary Works designs.
 - (3) Independent internal or external checking of the Temporary Works Design.
 - (4) Preparation of a Temporary Works register and records
 - (5) Pre-erection inspection of all Temporary Works, including materials, components and equipment.
 - (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to:
 - (a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO of a suitable sign showing it **as complete and safe to use;** and
 - (b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO of a suitable sign showing that it is ready for dismantling.**
- 1.37.9. The Safety Plan shall include measures to ensure that the design, erection, maintenance, dismantling and removal are all carried out by competent and experienced individuals and in a controlled and closely supervised manner.

- 1.37.10. For further information on Method Statements refer to JSSS 1.9 [*Contractor's Method Statements*].
- 1.37.11. For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [*Inspection and Monitoring of Temporary Works*].
- 1.37.12. Whether there is or is not any legal requirement under the Laws of the Country for academic, educational or vocational qualification, all of the Contractor's Temporary Works specialist staff and the specialist staff of Temporary Works Subcontractors shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate, work experience in construction and in Temporary Works design or supervision as appropriate and whom the Contractor ascertains are qualified to perform the duties and have been given consent by the Engineer.

1.14 User Training

- 1.38.1. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.
- 1.38.2. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.
- 1.38.3. User Training shall vary according to the scope of the Works however it shall generally cover the following:
- (1) Safe system and Plant use, operation and process control.
 - (2) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements
 - (3) Training in use of all hardware and software packages.
 - (4) Laboratory control (sampling and analysis) including operation of laboratory equipment.
 - (5) Recording and reporting.
 - (6) Emergency operation procedure.
 - (7) Maintenance management procedures.
 - (8) Inventory and store control systems.
 - (9) Particular safety procedures, including:
 - (a) Safe working procedure;
 - (b) Housekeeping of the facilities;
 - (c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and
 - (d) Safety measures for the Works and all items of Plant.
- 1.38.4. Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.
- 1.38.5. The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.
- 1.38.6. Other requirements for User Training

- (1) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.
- (2) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.
- (3) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.
- (4) The Engineer may choose to send representatives to witness the training.
- (5) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.
- (6) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.
- (7) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty-six (56) days before any training commences.
- (8) Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.
- (9) The Contractor shall use visual media as much as possible throughout the training process.
- (10) Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.
- (11) The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.
- (12) Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.
- (13) The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.
- (14) The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.
- (15) Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.
- (16) The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty-six (56) days.

- (17) Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week-days.
- (18) Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.
- (19) The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.

1.15 Unexploded Ordnance (UXO)

- 1.39.1. If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.
- 1.39.2. Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.
- 1.39.3. Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.
- 1.39.4. Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.
- 1.39.5. Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy of the further clearance certificate together with any further instructions from the Engineer.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:

- (1) “**Executing Agency**” means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer.
- (2) “**GC**” and “**PC**” followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) “**Health and Safety Officer**” or “**HSO**” means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [*Health and Safety*] as construed in accordance with JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].
- (4) “**JICA Standard Safety Specification**” or “**JSSS**” means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works.
- (5) “**Method Statement**” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] and supplemented by JSSS 1.9 [*Contractor’s Method Statements*].
- (6) “**Operation Leader**” (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations and who can also be referred to within the OSHA definition as a “Competent Person”.
- (7) “**OSHA**” means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- (8) “**Particular Safety Specification**” means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project as illustrated in Annex 1.4 [*Figures and Illustrations*].
- (9) “**Project Safety Specification**” means the document that contains Part 1 [*JSSS*] and Part 2 [*Particular Safety Specification*] as illustrated in Annex 1.4 [*Figures and Illustrations*].
- (10) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (11) “**Safety Plan**” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the

entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor's General Obligations*] as supplemented by JSSS 1.7 [*Contractor's Safety Plans*].

- (12) “**Safety**” shall also mean “occupational health and safety” and “health and safety”.
- (13) “**User Guide**” means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

- (1) “**Accident Response**” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [*Accident Response Plan*].
- (2) “**Confined Spaces**” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Cofferdam**” means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.
- (4) “**Dangerous Goods**” means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (5) “**Dangerous Work**” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.
- (6) “**Diver**” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.

For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [*Diving Works*].

- (7) “**Earthwork Support**” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.
- (8) “**Elevated Access Structures**” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.
- (9) “**Emergency Response**” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.2 [*Emergency Response Plan*].
- (10) “**Falling Objects**” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.

- (11) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (12) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (13) “**Hazardous Substances**” means any substance, whether solid, liquid or gas, that may cause harm to health.
- (14) “**Hazardous Areas**” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as Zone 0, Zone 1 or Zone 2, where:
 - (a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;
 - (b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and
 - (c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.
- (15) “**Hoisting Operation**” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.

For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [*Hoisting and Rigging*].
- (16) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.
- (17) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level.
- (18) “**Personal Fall Restraint System**” or “**PFRS**” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.
- (19) “**Personal Protective Equipment**” or “**PPE**” means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.
- (20) “**Safety Belt**” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.
- (21) “**Safety Harness**” means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.
- (22) “**Scaffold**” or “**Scaffolding**” means a temporary structure or structures that provide access on or from which persons work or to support Goods.

- (23) “**Skill Training**” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (24) “**Spotter**” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*].
- Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.
- (25) “**Trade Effluent**” means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.
- (26) “**Unexploded Ordnance**” or “**UXO**” shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.
- (27) “**User Training**” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.
- (28) “**Working Platform**” means a platform on or within a scaffold that is intended and designed to support persons or Goods.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

AED	Automatic External Defibrillator
BMGV	Biological Monitoring Guidance Values
CPR	Cardiopulmonary Resuscitation
ODA	Official Development Aid
OJT	On Job Training
PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings
TWA	Time Weighted Average
WEL	Workplace Exposure Limits

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ACI	American Concrete Institute
ANSI	American National Standards Institute.
ASHTO	American Association of State of Highway Transportation Officials
ASME	American Society of Mechanical Engineers

ASTM	American Society for Testing and Materials.
BS	British Standard.
BS EN	British Standard European Norm.
HSE	UK Health and Safety Executive.
ISO	International Organisation for Standardisation.
ILO	International Labor Organization.
JIS	Japanese Industrial Standards.

A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.

Annex 1.2: Content of Bid Stage Safety Plan

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan which is to be provided in accordance with “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA). The Safety plan is to be included in the Bidding Documents Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF-39.

A1.2.2. The Bid Stage Safety Plan shall be an outline plan which must, cover each of the items listed below with sufficient detail to demonstrate that the Bidder understands the requirements and with sufficient information to indicate the Bidder’s intentions, so that this can be understood and properly evaluated:

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder’s corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder’s head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder’s Personnel

A description of the health and safety management organisation at Site headed by the Bidder’s Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor’s Personnel involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Bidder’s Safety Management System

Refer to JSSS 1.5 [*Contractor’s Safety Management System*]

Confirm which scheme the Bidder is accredited under.

(6) Temporary Works

Refer to JSSS 1.13 [*Design and Management of Temporary Works*].

A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the safety measures to be applied to ensure compliance with the requirements.

Include a description of the scope of work for the principal specialist persons to be employed in the management and design of Temporary Works and the arrangements for

controlling risks arising from the design, erection, maintenance, dismantling and removal of Temporary Works.

The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)

(7) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.

(8) Safety Plan for the Permanent Works

A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.

(9) Safety Plan for Dangerous Work.

Refer to JSSS 1.22 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [*Definitions and Abbreviations*] and GC 4.1 [*Contractor's General Obligations*].

(10) Permit to Work System

Refer to JSSS 1.23 [*Permit to Work System*]

A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.

(11) Safety Measures for Contractor's Equipment

Refer to JSSS 1.11 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(12) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.10 [*Health and Safety Incentive Schemes*]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.

(13) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(14) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to JSSS 1.11 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(15) Site Inspection Plan

A description of the methods for Site inspections by the HSO, types of inspection and frequency.

The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work

(16) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.

(17) Policy for Preventing Traffic Accidents

A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.

(18) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(19) Accident Response Plan

Refer to JSSS 1.23.1 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.

It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.

(20) Health Care Plan

Refer to JSSS 1.12 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(21) Fire Response Plan

Refer to JSSS 2.8 [*Fire Prevention*]

Details of the fire prevention services to be provided at the Site.

The Fire Response Plan required by JSSS 2.8 [*Fire Prevention – Additional Requirements*].

(22) Emergency Response Plan

Refer to JSSS 1.2 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(23) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [*Contractor's Safety Management Activities*]).

(24) Safety Induction Training

Refer to JSSS 1.20 [*Safety Induction Training*]

An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(25) Skill Training

Refer to JSSS 1.21 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.

(26) User Training

Refer to JSSS 1.14 [*User Training*]

An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.

(27) Legal requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.

Annex 1.3: Additional Contractor Forms

Attached Forms:

Form JSSS/BSD - Bidder's Safety Declaration

Form JSSS/SAR - Sample Accident Report

Form JSSS/BSD - Bidder's Safety Declaration

[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]

I, *[insert name and position of authorised signatory]*, being duly authorised by *[insert name of Bidder/members of joint venture (“JV”)]* (hereinafter referred to as the “Bidder”) to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.

The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.

The Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder declares that he will mobilise for use upon the Works:

1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability.
3. Fully inform workers about hazards;
4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed, in a language and vocabulary they can understand.
5. Keep accurate records of work-related injuries and illnesses.
6. Perform tests in the workplace, such as air sampling as required by the Safety Specification.
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.

9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract.
10. Post injury and illness information and data where workers can see them.
11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site*)

Or

Bidder's Head Office Health and Safety Manager*)

Name:

Date: _____

(*Delete as applicable)

Form JSSS/SAR – Sample Accident Report

[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.1 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality) (If casualty(ies) is(are) belonging to subcontractor,) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	
8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	

(above to be inserted before all reports)

FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location of accident occurrence:	
4) Brief background and apparent cause:	
5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
6) Physical damages to the Works, Site and any properties of the third parties	
7) Present medical status of casualty(ies):	
8) Present work status:	
9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
10) Accident Report Submission Date	

SUBSEQUENT REPORT INFORMATION (POST-INVESTIGATION):	
1) Cause(s) of the accident:	
2) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:	
3) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
4) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
5) Other Information:	

Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____	Contractor's Health and Safety Officer (HSO)
Receipt acknowledged by: (name): _____ (sign): _____ Report Receipt Date(s) _____ Time: _____	Engineer

(above to be inserted with detail and signatures at end of each report)

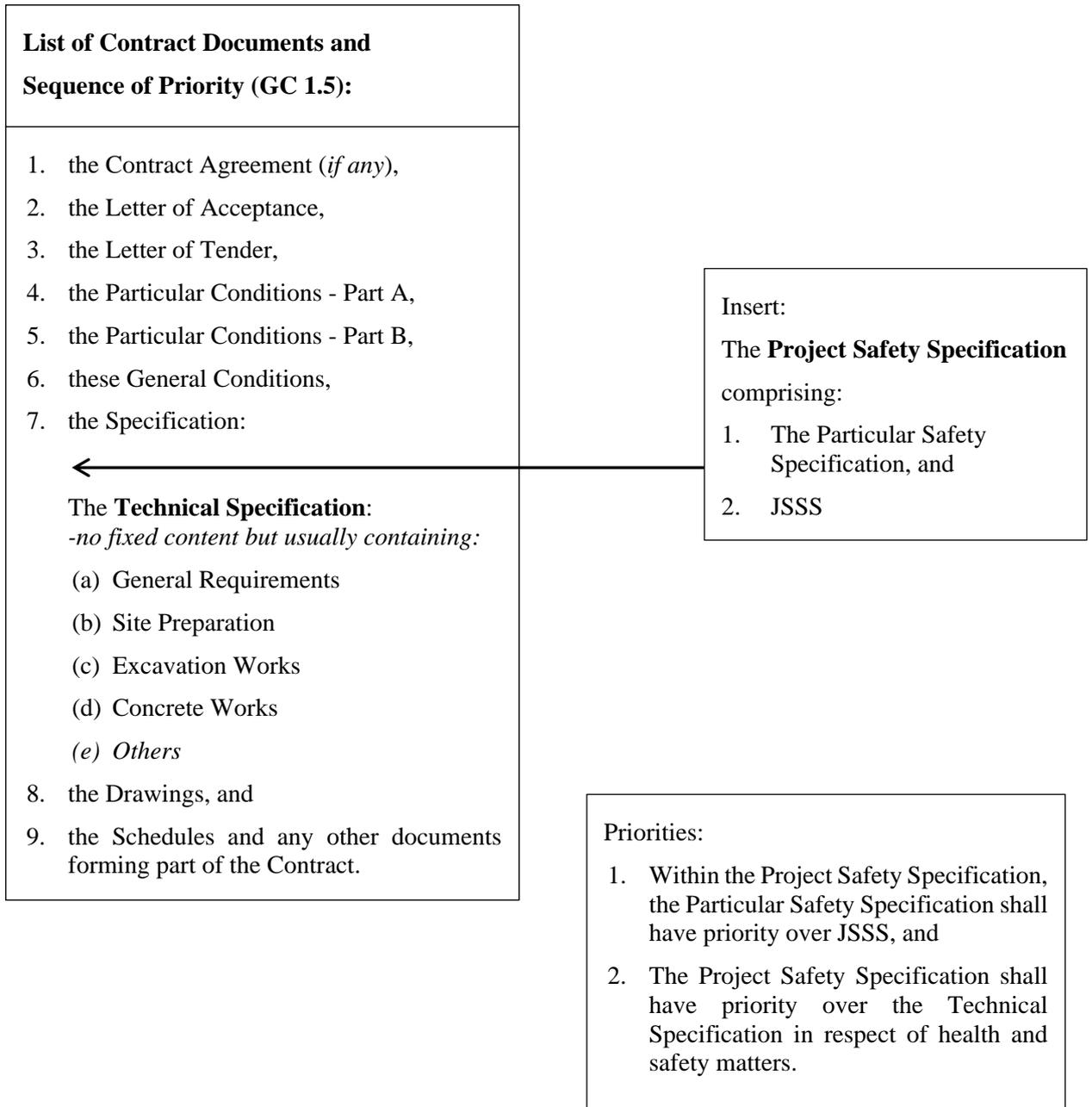
Annex 1.4: Figures and Illustrations

Attached Documents:

Fig A1.4.1 Incorporation of JSSS in Bid and Contract Documents

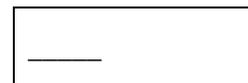
Fig. A1.4.1

Incorporation of JSSS in Bid and Contract Documents



Yellow marking and red letters : Comments by NK (20200319) & (20200327)

Green – subsequent changes made by DCI, *Replied to NK inquiry and added DCI notes* (20200325)



JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE ODA



***Japan International Cooperation Agency
(JICA)***

_____, **2020**

Prepared: DCI for NK
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ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:

1) Japanese Acts, Orders and Ordinances including:

Industrial Safety and Health Act
Order for Enforcement of Industrial Safety and Health Act
Ordinance on Industrial Safety and Health
Safety Ordinance for Cranes
Ordinance on Safety and Health of Work under High Pressure
Ordinance on Prevention of Anoxia, etc.
Ordinance on Prevention of Hazards Due to Dust
Explosives Control Act
Order for Enforcement of Explosives Control Act
Ordinance on Explosives Control

2) OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.

3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.

4) The International Red Cross and Red Crescent Movement (ICRCM)

NK: In 2.9.2 First aid kit: ANSI Z308.1 is referred to. Is the above 4) necessary?

True: ANSI is the kit but first aid courses will also be necessary (see added clauses in Section 2.9 and Chapter 10 also). ICRCM seems to be a convenient and internationally applicable basis.

5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)

Suggestion for JICA:

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JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

Draft
Requires further
coordination

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	Annex 1.3	Additional Contractor Forms
	Annex 1.4	Figures and Illustrations
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	2.2	Risk Control Around the Site
	2.3	Prohibition of Entry – Dangerous Work
	2.4	Spotters, Flagmen and the Like
	2.5	Fall Prevention
	2.6	Falling Objects
	2.7	Adverse Weather Requirements
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	5.2	Hoisting Operations
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6. Temporary Works	6.1	General Requirements
	6.2	Earthwork Support
	6.3	Coffer Dams
	6.4	Walkways, Ladders and Stepladders
	6.5	Scaffolding
	6.6	Elevated Access Structures
	6.7	Temporary Electrical Installations
	6.8	Electric and Gas Welding and Cutting
7. Excavation Works	7.1	General
	7.2	Particular Safety Measures
	7.3	Manual Excavation
	7.4	Excavation by Blasting
8. Foundation Piling Works	8.1	General
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		Particular Safety Measures for Insitu Concrete Work

	9.2	Reinforcement
	9.3	Formwork (including Falsework)
10. Diving Works	10.1	General
	10.2	Dive Safety Plan
	10.3	Personnel for Diving Operations
	10.4	Diving Equipment, Tools, Facilities and Workboats
	10.5	Particular Safety Measures
	10.6	Diving Accident Control Plan
11. Railway Works	11.1	<i>Excluded - to be included in JSSS Second Edition)</i>
12. Road Works	12.1	
13. Bridge Works	13.1	
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JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

1.1 Safety Declaration

1.1.1. Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.

1.1.2. A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.

NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance1.3 and modify the 1.1.2 as follows:

1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Deflation.

This is specifically a Bid form to be submitted with the Bid and the wording is correct. Actually, this does require a change to the JICA Standard Bidding Document as included in our earlier draft but JICA do not want to do this.

I have modified the User Guide to state this but the same problem will arise, the User Guide requires the Executing Agency to change the Bidding Documents but the SBD prevent this.

If JICA do not change the SBD this will continue to be a problem and for now all else must therefore be an unsatisfactory compromise.

NK: MD氏は上記のようにSBDの様式の追加は認められていないが、User Guideに含めました。請負者の安全宣言の様式をUser Guideに含めることは、SBDの規定上、問題ないでしょうか？

1.2 General Reference Notes

1.2.1. For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].

1.2.2. The following further general reference notes apply to the content of JSSS:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
- (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an **equivalent alternative** diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.
- (6) Any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor’s Personnel shall also be deemed to include the provision by the

Contractor of the same such health and safety measures for Employer's Personnel and all other persons that are entitled to be on the **Site**.

NK: There are many descriptions of "other the Site areas (if any) where the Works are being executed" in JSSS. GC defines as 1.1.6.7 "Site" means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.(NK のコメントにより、すでに削除済ですが、Q&A は残しました。)

May we know the following?

Q1: Which places you are assuming as other places?

Q2: Are other places specified in the Particular Safety Specification?

Other places may be specified in the Contract as forming part of the Site such as offsite storage areas provided by the Employer or Employer's and Engineer's compounds and facilities all of which may be remote from the Site but for which the Contractor still has the usual obligations such as care, insurance, maintenance, etc.

This is obviously creating difficulty with interpretation, so I have deleted all such reference in JSSS and it now it constantly refers to the Site only. This will also be considered for mention in the User Guide

(7) Any reference in JSSS to "relevant authority" or "relevant authorities" shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.

(8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the **Employer, Multilateral** Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

1.3.1. JSSS shall form a part of the Project Safety Specification which in turn forms a part of the Specification as illustrated in Annex 1.4: [Figures and Illustrations], Fig A1.4.1 [Incorporation of JSSS in Bid and Contract Documents] and as follows:

(1) JSSS shall be included as a part of the Specification for the Works, which shall be subdivided into two parts namely:

(a) The Project Safety Specification (including JSSS), and

(b) The Technical Specification

1.3.2. The priorities of the document comprising the Specification are as follows:

(1) Within the "Project Safety Specification" the Particular Safety Specification shall have priority over JSSS,

(2) The "Project Safety Specification" shall have priority over the Technical Specification in respect of health and safety matters.

NK: Q1: We think it needs to explain/define "Technical Specification" as same as User Guide 1.3.2 (3) The "Technical Specification" shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safety.

Yes I agree but the problem again is that "Specification" is already defined in the General Conditions of Contract and any change should be therefore be through a Particular Conditions change but JICA do not want this.

I have added the explanation as above but please note that this is a compromise.

Q2: Is "other parts of" necessary?

Thank you and no, it isn't, see above. (すでに削除済みです。)

1.3.3. The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.

I recommend that the following is necessary

The User Guide shall not form a part of the Contract.

NK: : MD 氏は上の追記を提案していますが、入札図書として出てこないもので不要と考えます。

1.4 Compliance with JSSS and Other Regulations

1.4.1. JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.

1.4.2. JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

1.4.3. The Contractor shall comply fully with the requirements of JSSS as supplemented and modified by the Particular Safety Specification.

1.4.4. Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer's Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.

1.4.5. Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply.

NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?

It is intended to be for the situation where JSSS has been agreed to be use, but it is lacking in some areas in which case we use the Laws.

1.4.6. If there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent.

NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?

It is intended for use where we have dropped back to the Laws but there are no particular Laws available.

I have no objection if both are deleted.

NK: 1.4.5 と 1.4.6 を合わせた次のような規定ではいかがかと考えます。

If there are no or insufficient safety provisions in the Laws of the Country and in JSSS and the Particular Safety Specification for the particular part of the Works, and if the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent. (subject to MD's review.)

1.4.7. Specified Standards and Regulations:

(1) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.

(2) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.4.8. Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the

Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".

1.4.9. If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:

- (1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.
- (2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear.

1.4.10. Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion, during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification.

NK: We consider that this phrase may be changed to "and the Defects Notification Period"? (Though the phrase is correctly expressed.)

No, your suggested change would not be correct this has been especially drafted following JICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).

The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer's property except as stated in this clause.

NK: we agree to leave this as specified.

1.4.11. The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.

1.5 Contractor's Safety Management System

1.5.1. The Contractor shall institute a health and safety management system in accordance with OHSAS 18001 or ISO 45001:2018.

1.5.2. The Contractor shall state the applicable standard in the Contractor's Safety Plan.

1.5.3. The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.

NK: JICA deleted 1.5.3 in the last comment because JICA wants for the Contractor to institute and operate HS management system but not request submission of certification. (actually and practically certificate is not much important). We think 1.5.3 should be deleted.

I have deleted the requirement with the Bid (see Annex 1.3), however if the contractor is to comply with a scheme how does the Engineer know which scheme and how to verify compliance?

It has no little or no meaning otherwise.

NK: JICA intention is only to apply the safety management system excluding the certification and auditing by the certification body. Therefore, 1.5.3 is considered not request certification. この考え方で正しいでしょうか?

1.6 Checking and Validation of Submissions

1.6.1. In accordance with GC 4.9 [Quality Assurance] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval

or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination, design and supervision staff and any independent checkers as appropriate.

NK: Is this correct that we think 1.6.1 is added in relation with design of TW, etc.?

Not only TW it also applies to his Safety Plans, Method statements, any shop or working drawings. In fact any Contractor submissions are stated.

1.6.2. For the purposes of interpretation for JSSS, the final paragraph of **GC 1.8** [Care and Supply of Documents] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible.

NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.

This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. I believe that with the increased amount of submissions such as method statements, safety plans and temporary works details, there is an increased possibility that the Engineer could comment but chooses not to or even overlooks or misses, errors. If this happens there is the risk of avoiding responsibility if an error or defect (what is this?) should have been discovered.

It is a strange but potentially onerous obligation that is inconsistent with GC 4.9 even if 1.8 does not state the consequences: GC 1.8 states: "If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect."

NK: 貴機構のご意見はいかがでしょうか？

1.7 Contractor's Safety Plans

1.7.1. The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.

1.7.2. The Safety Plans shall set out or refer to all the health and safety requirements:

- (1) that are stated in JSSS;
- (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and
- (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site.

1.7.3. The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:

- (1) Bid Stage Safety Plan (Outline Overall Safety Plan).
- (2) Commencement Stage Safety Plan (Updated Overall Safety Plan)
- (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works

NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.

I don't quite understand your comment, the Bid Stage Plan is followed by an updated plan after Commencement but this is still an early plan and the same plan (or parts of it) will probably require to be further revised and updated as the detail of works develop and before any parts of the works commence.

NK: We understand your meaning.

1.7.4. The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level. ~~throughout the Time for Completion of the Works.~~

~~1.7.5. Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility. and at any time throughout the Time for Completion of the Works.~~

NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?

Yes thank you, that is true, but better to delete the phrase rather than add.

1.7.6. Bid Stage Safety Plan:

- (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [*Content of Bid Stage Safety Plan*].
- (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

1.7.7. Commencement Stage Safety Plan

- (1) This shall be submitted within twenty-eight (28) days ~~after~~ the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site,
- (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.
- (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.

NK: Is it not necessary to specify to review Commencement Stage SP?

Can we consider Commencement Stage SP is not be reviewed and the Engineer may review it and give comment in accordance with GC 1.8 Care and Supply of Documents though Japanese draft is specified to review it within 14 days?

Fair comment: I had modified the following clause 1.7.8 to deal with Particular Safety Plans. The Commencement Stage Safety plan is another contract stage submission subject to the same procedures so I have added it there.

Please also note the above correction to the submission date of the plan which should be twenty-eight (28) days after the Commencement Date.

1.7.8. Particular Safety Plans

- (1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.

1.7.9. Procedures for Submission and Review

- (1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works.
- (2) The Contractor shall submit:

(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].

(b) The Particular Safety Plans within fourteen (14) days after the date of the Engineer's request.

NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?

I have changed this

Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP.

We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan

I disagree; many of the items mentioned in Issue 6 are to be included in the Method statement and all other items are included in Annex 1.3 all of which will be progressively developed. There is no need to include additional information here.

NK: understand.

(3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:

- (c) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;
- (d) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and
- (e) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.

1.7.10. The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.

1.7.11. Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.

1.7.12. The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.

1.8 Risk Assessment

1.8.1. In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.

1.8.2. The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.

1.8.3. The procedural flow of risk assessment shall be as follows.

- (1) Identifying hazards.

- (2) Evaluating risks.
 - (3) Determining measures of risk reduction or elimination.
- 1.8.4. The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:
- (1) Removal of hazards such as eliminating dangerous methods of construction.
 - (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
 - (3) Engineering measures.
 - (4) Management measures including improving skills with additional training.
 - (5) Use of PPE.

NK: May we know what "improved PPE" mean?

Deleted

1.9 Contractor's Method Statements

- 1.9.1. The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.
- 1.9.2. Method Statements shall include details of all Permanent Works and Temporary Works with supporting documents such as:

- (1) **Studies, investigations and designs.**

NK: We suggest to change to "Studies, investigations, and designs"?

Changed

- (2) Structural calculations and any other calculations.
- (3) Specifications and technical details.
- (4) Proposed construction procedure, sequence and method.
- (5) Construction resources including **superintendents, workers, operation leaders** and Contractor's Equipment.

NK: We consider "worker" will be used because it is used in other Chapter though FIDIC uses "labour".

Ok I have changed anyway but it now needs wider wording, labour is also used in FIDIC

- (6) Inspection and monitoring plan.
- 1.9.3. The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.
- 1.9.4. Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.

Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:

- (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.

- (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.
- (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.
- (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.
- (5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.

NK: We consider "for his information" can be deleted because this phrase is not used for Safety Plan though Issue 6 used it.

Changed.

1.10 Engineer's Safety Representative

- 1.10.1. Unless otherwise specified in the Particular Safety Specification, the Engineer's delegated representative at the Site shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS.
- 1.10.2. The terms of the appointment shall be in accordance with GC 3.2 [*Delegation by the Engineer*].
- 1.10.3. Whenever the term "Engineer" is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.

1.11 Safety Compliance Instructions from the Engineer

- 1.11.1. Without affecting or diminishing the Contractor's responsibility under GC 4.1 [*Contractor's General Obligations*] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.
- 1.11.2. If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [*Suspension of Work*] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.
- 1.11.3. If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer's consent and implemented such measures to ensure that no such accident can reoccur.
- 1.11.4. The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.12 Health and Safety Officer at the Site (HSO)

1.12.1. For the purposes of interpretation under JSSS, the reference to “accident prevention officer at the Site” in GC 6.7 [Health and Safety], shall be construed as “Health and Safety Officer at the Site”.

NK: HSO is defined in A1.1.1(3), so can 1.12.1 be deleted?

No: This is necessary to correspond to the definition.

Please note that this is a compromise, PC change would have been preferable.

1.12.2. Requirements for the HSO:

- (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.
- (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor's Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety].
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management.
- (8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country), and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.

NK: We considers NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot not find such person. Large contractors and European contractors may find them.

We propose to add (7) “unless otherwise specified in Particular Safety Specification” before “the HSO...”

I have split this clause for clarity

I suggest that NEBOSH is OK as it is because an equivalent alternative is acceptable (see use of this term in JSSS 1.4.7.

It is also subject to receiving the consent of the Engineer.

NK: We think “two (2) years experience outside the Country” is also too high requirement for the local contractors and also Japanese.

We propose to delete “this two years outside the Country” and specify requirement in Particular Safety Specification depending on the Works.

I suggest that it is better to state here as a basic standard. If JSSS cannot specify a general standard, the choice of Executing Agencies will vary greatly. I will draft a relevant clause for the User Guide but please note that I have reduced the experience requirements and deleted the international requirements.

1.12.3. Supporting Staff

NK-1: JICA commented and minutes recorded in January as follows:

7.1.1 (5) HSO's duties:

JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.

No this is not a correct understanding, the HSO duties and obligations are far wider which is why this clause is correct and necessary

Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?

Yes, he will be very busy which is why he must be qualified and experience and given the full support staff that he requires and why he must receive the support of other Contractor's Personnel particularly Operation Leaders, all as stated herein .

MM: HSO should always be ultimately responsible as the leader really of the Contractor's safety team with support duties delegated as necessary to a number of personnel including Operation Leaders. This is described in Chapter 1.10.1 and has been discussed. No change is required.

NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:

3. Common requirements in JSSS

- (4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の “The HSO shall inspect work area before starting work...” は、“The Contractor shall ...”へ変更する。*

HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.

From this idea, the HSO in the sentence “The HSO shall inspect work area before starting work...” shall be replaced with “the Contractor”.

Please let me review the Excavation comments when I receive them, however this looks correct as he is responsible for inspecting the safety arrangements, even if another person does the inspection on his behalf. It needs no change but the work will not always be directly inspected by him, he can and will delegate but he is singularly responsible and will sign it off.

NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).

We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor's Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.

Based on the above idea, we want to revise some sentences below.

- (1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.*

- (2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.

NK: We propose to delete (2) from the idea of mentioned above NK-3. The supporting personnel shall be full time assignment. The Contractor shall establish system of daily check by the site staff or designated personnel for check by the Contractor and reporting by the site manager to the HSO.

I think that (2) is clear, correct and necessary. Please refer to the following clauses also. It can be full time assistants or other Contractor's Personnel also who shall check certain aspects and who shall also have other responsibilities given to them by the HSO.

NK: MD氏は、まだ supporting personnel についての貴機構の意見をまだ十分理解していないように感じておりますが、貴機構のご意見はいかがでしょうか？。

- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) The HSO shall be expected to develop internal procedures whereby all supporting personnel, shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.
- (6) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

1.12.4. Inspections

- (1) The HSO shall be responsible for ensuring:
- (a) That all working areas of the Site are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;
- (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and
- (c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE].
- (2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.

1.13 HSO - Scope of Duties and Authority

NK: JICA added "and Authorities" in the last comment.

Now changed as above

- 1.13.1. The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.
- 1.13.2. The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:
- (1) Health and Safety Management Work:
 - (a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;
 - (d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;
 - (e) Temporarily stopping the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.11 [*Safety Compliance Instructions from the Engineer*];
 - (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
 - (g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;
 - (h) Appointment of further supporting personnel (refer to 1.12.3 [*Supporting Staff*]);
 - (i) Instructing and training **Operation Leaders** in the health and safety aspects of their work including requirements for inspection and **confirmation** of results to HSO;

NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above:

- (i) Instructing and training the person in charge of construction works and the Contractor's Equipment in the health and safety aspects of their work including requirements for inspection and reporting of results to HSO;*

I disagree and do not feel that any change is necessary. The position and authority of the HSO for the health safety on the Works should not be compromised. Who he requires assistance from is really his choice and it is dependent upon many factors such as the contractor's organisation, who is available, the general experience, capability and skill level of workers. We or the Engineer should have no interest in who he delegates support to providing the HSO does his job properly.

NK: 貴機構のコメントを伝えましたが、MD氏はまだ上記の意見です。貴機構のご意見はいかがでしょうか？

- (j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;
- (k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;
- (l) Planning and implementation of various training and education implementation plans;
- (m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;
- (n) Preparing regular internal and external reports on health and safety activities; and

- (o) Hazard prediction activity.

1.14 Procedure for Resuming the Works

1.14.1. If the Engineer has issued an instruction under JSSS 1.11 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [*HSO - Scope of Duties and Authority*] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.
- (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within fourteen (14) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving seven (7) days' notice in writing of the resumption date.

To be proactive, the Engineer may give consent at any stage within the above stated time scales.

- (5) The Contractor resumes the Works or part of the Works on the due date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1. The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2. In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

NK: We think the 1.15 is same as Japanese draft, however, we feel it is not clear who take the following action.

Is there any good idea to express the H&S management shall be made by management personnel consisting of construction managers, Operation Leaders, HSO (for reference I added personnel in charge of the activities below.).

Please see above notes, I do not feel that the following is desirable or necessary.

For further understanding, the Contractor's Representative has similar in fact heavier responsibilities but we (nor FIDIC) consider defining which of his staff do what to support him, I do not recommend but we try to do it.

Overall Safety Management Activities:

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); *(by construction managers, Operation Leaders, HSO)*
- (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and *(by construction managers, HSO)*

- (c) Monitoring the implementation of the Safety Plan. ~~(by HSO)~~

~~Above is not recommended~~

- (1) ~~Daily~~ Safety Management of Contractor's Personnel:

~~NK: We would like to add "Daily" before Safety in (2) to distinguish from (1).~~

~~No problem added already~~

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; ~~(by construction managers, HSO)~~
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures; ~~(by construction managers, Operation Leaders)~~
- (e) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: ; ~~(by construction managers, Operation Leaders)~~
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
- (d) Instruction and management of safety education and training; ~~(by construction managers, HSO)~~
- (e) Instruction and management of all safety measures; and ~~(by construction managers, Operation Leaders, HSO)~~
- (f) Site Safety Inspections-~~(by construction managers, Operation Leaders, HSO)~~

~~None of above is recommended.~~

~~NK: We withdraw the addition.~~

~~NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.~~

~~No problem deleted already~~

1.16 Joint Site Safety Inspections

1.16.1. In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.

1.16.2. Frequency of Joint Site Safety Inspections shall be at least once a week.

1.16.3. Where any safety risks are detected during the inspections, the Contractor shall take immediate action.

1.16.4. The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.

1.16.5. The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.17 Compliance Monitoring and Auditing

1.17.1. The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ~~ensured. Such compliance~~ shall be monitored efficiently and transparently at all ~~times, for~~ which purpose the Contractor shall:

~~NK: We propose to divide the above to two sentences because the above sentence is long and contains two subjects.~~

~~This is not quite correct but I have divided anyway~~

- (1) Create checklists for monitoring.
 - (2) Carry out regular and random inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents.
 - (4) Create storage and filing systems for the monitoring records.
 - (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer.
- 1.17.2. Safety inspections are intended to search for risks and hazards, which present a threat to safe working.
- 1.17.3. The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:
- (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
 - (2) Are the Safety Plan requirements being met?
 - (3) Is there documented proof of compliance?
 - (4) Is health and safety training effective?
 - (5) Is the Contractor's health and safety management system working effectively?
- 1.17.4. The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.
- 1.17.5. The audit team procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer. Unless otherwise consented to by the Engineer, the audit shall be headed by a senior member of the Contractor's head office health and safety team.
- 1.17.6. If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.
- 1.17.7. The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.
- 1.17.8. The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.
- 1.17.9. The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems.

The Audits shall not replace the regular health and safety inspections.

NK: We think the above sentence is better to be divided two sentences.

This is not quite correct but I have divided anyway

1.17.10. The audits shall be conducted ~~on a random basis~~ at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.

~~1.17.11. The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor.~~

NK: JICA deleted in the last comment. We also consider the Engineer does not do auditing but inspection/supervise the Contractor's activities, and agree to delete this.

I do not really understand why it is deleted, as in any case the Engineer should be able to request/initiate an audit if he feels that the H and S system is not working properly.

NK: NK misunderstood this clause as the Engineer to do audit. We recommend now as follows;(time limit is given considering the preparation and trip time of the auditing team, and the safety management state cannot be improved in short time except such as cleaning the site, etc. If the Contractor takes actions for the auditing in short time, there is a merit for the Contractor to show example of required improvement.

The Engineer may at his option instruct the Contractor to execute a health and safety audit by giving proper preparation time for the auditing team between 3 days and 7 days.

NK: 機構のご意見はいかがでしょうか。

~~1.17.12. Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.~~

NK: JICA commented “Such “not to do” should not be included in the specification.” and deleted this sentence in the last comment. We agree to delete this because the auditing team cannot come to the site from Headquarters located in other countries by short notice, and the ISO auditing is made by around one month notice or as scheduled.

No comment, to be deleted

1.17.13. An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.

1.17.14. The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.18 Proper Placement of Contractor’s Personnel

1.18.1. To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor’s Personnel consequently protected.

1.18.2. In compliance with GC 6.9 [*Contractor’s Personnel*], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor’s Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.

Change not correct

1.18.3. Labourers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor’s safety regulations.

1.18.4. The correct grades and numbers of Contractor’s Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.

1.18.5. The Contractor shall specifically ascertain that Contractor’s Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.

1.18.6. The HSO shall countersign all such records to certify his confirmation that each member of the Contractor’s Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.

- 1.18.7. Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:
- (1) Work content and work environment.
 - (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability.
 - (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
 - (4) Allocation of an achievable and safe work volume and time.
 - (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].
- 1.18.8. If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.
- 1.18.9. The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.
- 1.18.10. The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that **the HSO** resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.

NK: We think it is better to replace "he" with "the HSO" though he/she is nowadays used.

It is not necessary, please refer to JSSS 1.2.2 (8) and GC 1.2.(a). I have used "He" and "his" for example consistently and if it changes here it will require further change.

1.19 Safety Training Generally

- 1.19.1. The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.
- 1.19.2. The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.
- 1.19.3. Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.

1.20 Safety Induction Training

- 1.20.1. Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom ~~he~~ **the HSO** is responsible, including the Employer's Personnel and all other persons who are entitled to be on **the Site at** the request of the Employer or Engineer.

Ditto above

1.20.2. The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.
- (5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (Refer to separate requirements for special training).

NK: May we know where we can find to refer to special training?

Rephrased

- (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.
- (7) Maintaining all working areas in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.
- (9) Firefighting; actions, precautions and control.
- (10) Health and safety rules.
- (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

1.20.3. Practical on-Site demonstrations shall be included.

1.20.4. Training Personnel

- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
- (2) All trainers shall be fluent in the language of the persons to be trained.
- (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.

1.20.5. Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.21 Skill Training

1.21.1. The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which

require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.

- 1.21.2. The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects.

Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.

This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion.

Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply:.

- (1) To compliment this OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to provide basic skill training to develop the ability of local counterpart trainee operation leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots.
- (2) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

Consent is better which is why I have used it. There will be a great tendency for the Contractor not to comply with these requirements properly and it needs to be enforceable somehow, otherwise safety (and quality and performance) will suffer.

"For information" really has no meaning.

If only "for information", Contractor can proceed even if the course syllabus and hours are clearly inadequate and would not otherwise be acceptable.

The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

Details of such training shall be submitted with the Bid Stage Safety Plan.

NK: This request is specified in Annex 1.2 (24)(26) as Outline shall be submitted in Bid Stage SP.

This has been repeatedly discussed and explained.

If safety is to improve, this must happen from Bid stage onwards.

Every part of the Bid SP is Outline but some information is necessary on each subject listed in the Annex and should be submitted at Bid stage. If it is inadequate, only then can it be clarified and negotiated before the Contract is signed. After signing, is often too late.

NK: We agree to MD's opinion. However, the above sentence needs to be modified to such as "Updated details of such training mentioned in the Bid Stage Safety Plan shall be submitted."

1.21.3. Subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.

1.21.4. When the Contractor is satisfied that candidates have been successfully trained and qualified, and that they are able to act fully in accordance with the requirements of the Contract and subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries

NK: This sentence may be necessary to be reviewed.

Please review the above. Control is essential otherwise the working trainers will be demobilised too soon.

Please also note that this entire clause is my suggestion only, if JICA and/or NK do not want it, please advise and I will delete all such training as necessary.

NK: 機構のご意見はいかがでしょうか？

1.21.5. It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice based upon capability in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.

1.21.6. Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

See above notes, it really should be "consent"

1.21.7. Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

1.22 Dangerous Work

1.22.1. Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.22.2. Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.22.3. The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [Permit System] that is to be worn conspicuously and be available for validation by the Engineer.

I have added the following because of apparent concerns over the meaning of JSSS 2.5.1.(3)

1.22.4. The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist trained personnel. The Contractor shall prepare safety procedures to ensure that any such

inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.

- 1.22.5. A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.
- 1.22.6. The Contractor shall select, train and equip a specialist rescue team or teams of selected workers at the Site, who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue.
- 1.22.7. Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.

NK: Harness is basically used now and belts is not, so deletion of belt is made.

Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 2.

The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works.

~~1.22.8. The requirement for rescue teams and rescue equipment shall be as specified in the Particular Safety Specification.~~

- 1.22.9. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.
- 1.22.10. The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.
- 1.22.11. Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.
- 1.22.12. For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [*Prohibition of Entry – Dangerous Work*].
- 1.22.13. Hazardous Substances.
- (1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialist Subcontractor(s) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.
 - (2) The Contractor shall obtain the Engineer's consent for such specialist Subcontractors and their detailed Safety Plans and Method Statements shall also be submitted to the Engineer in accordance with JSSS 1.7 [*Contractor's Safety Plans*] and JSSS 1.9 [*Contractor's Method Statements*].

1.23 Permit to Work System

- 1.23.1. The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.
- 1.23.2. The system shall be designed to control safety for all types of high-risk work likely to be encountered, including for example:

(1) Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3

Example of Dangerous Work.

There is no need to change this or give any examples, please refer to the definition of Dangerous Work in Annex I.1. If you insist, change to “for example” as in the following subclause.

- (2) Work in elevated positions, for example, transmission towers ~~ladders and scaffolding, roof or ceiling work.~~
- (3) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.
- (4) Diving Works.

NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.

I believe that this will vary according to the actual project scope and I recommend to leave as it is. It is better to be left to the discretion of the HSO.

- 1.23.3. The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.
- 1.23.4. Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.
- 1.23.5. The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

- 1.24.1. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of **the Works**, the **Contractor** shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor’s Personnel and Employer’s **Personnel and all other persons who are entitled to be on the Site.**

NK-1: JICA commented to modify and add “so specified in the Specification” to 1.20.2 in Issue 6.

NK consider that “as specified in Particular Safety Specification” between “the Works,” and “the Contractor” if we follow JICA’s comment.

NK-2: JICA commented that they want to use “as specified in Particular Safety Specification” more than “unless otherwise specified in Particular Safety Specification” because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSSS)

Can you specify as JICA’s request to use “as specified in PSSS”?

- 1) *I do not recommend any use or reliance on “as specified in PSSS”. If something is then not so mentioned in PSSS, (even when it should be), this means that there is no requirement stated.*
- 2) *“Unless otherwise specified” followed by stated requirements is the preferred and better method as the stated requirements in JSSS are then a default and even if nothing further is stated in PSSS, there will always be these requirements to rely on. This is a “failsafe” in JSSS production.*
- 3) *More importantly, it must be understood that the availability of these facilities is a total Contractor responsibility under FIDIC (Clause 6.7), under which the Contractor must provide such facilities, whether specified further by the Employer or not and the PSSS must not compromise this.*
- 4) *The problem is that work in distant and remote places is a very common feature of JICA projects (such as hydro, water supply, power, irrigation etc.) and frequently proper health and safety facilities are just not made available by the Contractor at the Site at the expense of human life and safety. Often there are no local health authorities, or they are not equipped or not capable or they are too far away to*

be of any value. Very often contractors do not provide facilities to save money and health and safety suffers badly. This is fairly common practice and a common problem.

5) The changes are suggested as a means of improving this situation and they should therefore be viewed against this background.

NK-3: JICA want to clarify who “other persons who are entitled to be on the Site” are, and where “other places (if any) are.

“other persons who are entitled to be on the Site” is from FIDIC (Clause 4.8 and others) and for whom the Contractor has responsibility for care, protection and safety. This is all-embracing and extends beyond Contractor’s Personnel and Employer’s Personnel to allow anyone who has a legal entitlement to be there (e.g. other contractor’s, residents, others who have a right of way through the site, families of site staff if formally living there and others). I have stated this so that the extent of contractor’s compliance with JSSS is clear and so that it does not diverge from the contract. I do not recommend that it is changed.

“and any other places as may be specified in the Contract as forming part of the Site” comes from the definition of Site (GC 1.1.6.7) which I have already deleted throughout for clarity and for which will consider and may add an appropriate note in the User Guide.

NK: 貴機構のご意見はいかがでしょうか？

1.24.2. The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.

1.24.3. Unless otherwise specified in the Particular Safety Specification, medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor’s Personnel, the Employer’s Personnel and the family members of all other persons who are entitled to be on the Site.

NK: JICA want to clarify where “other places (if any) are.

Deleted see above

1.24.4. The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.

1.24.5. Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example include:

- (1) Medical staff to be assigned at the Site.
- (2) Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.
- (3) Emergency medivac services where necessary.

NK: We feel that the provision of medivac services seems excessive unless health insurance can cover it.

I disagree if it means saving a life. Whether health insurance covers it or not is irrelevant. There will be situations where it is available and necessary to save life, so can JICA say that fatality is acceptable as the alternative was too expensive?

- (4) Medical Facilities on the Site together with description of equipment and consumables. **in**
- (5) Temporary water and power supply to maintain use during mains supply failure.
- (6) Type of communication facilities and measures for emergency response.
- (7) Deployment of appropriate first aid appliances, aids, instruments and medicines.
- (8) First aid training, appointment of first aiders and dissemination of information.

1.24.6. Where the Works include the following for example, the Contractor shall train selected Contractor’s Personnel to perform rescue operations in a safe manner in the event of any accident:

- (1) Work on or near existing electrical equipment, cables, wiring, services and systems.
- (2) Dangerous Work **such as Confine Spaces, work at height.**

NK: We consider describing example as above.

Please see above notes and Annex 1.1 Definitions. I do not agree that any such examples are necessary

- (3) Diving Work.
- (4) Similar special circumstances.

1.24.7. All rescue team members in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [**PPE and First Aid**].

1.24.8. Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by **OSHA** and as referred to in **JSSS 2.9 [PPE and First Aid]**.

NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.

Better to delete reference here "as recommended by OSHA" and include your clear requirements in JSSS 2.9 [PP and First Aid].

1.25 Measures at the Time Accidents Occur

1.25.1. When an accident occurs, **the HSO the Contractor** shall immediately discontinue the concerned work, **inform the Engineer** and take all efforts to:

NK: JICA added in the last comment.

NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6.

I disagree completely and do not recommend this (or any such) change . As I have explained repeatedly, the HSO must have this authority in order to fulfil his safety control functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible.

NK: 貴組織のご意見はわかりでしょうか

- (1) Safely locate and extract casualties.
- (2) Provide first aid treatment at the Site.
- (3) Implement Secondary accident prevention activities, including:
 - (a) Preserving the accident site, make safe and prevent anyone interfering or entering;
 - (b) Discontinuing construction work related to or in the vicinity of the accident; and
 - (c) Implementing any further measures instructed by the Engineer.

1.25.2. Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident.
- (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The Accident Report shall include details of **the HSO's, the Contractor's** recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [*Additional Contractor Forms*].

Please see above notes on this subject. This should remain as the HSO, I disagree and do not recommend this (or any such) change.

1.25.3. For resumption of work procedures, refer to JSSS 1.14 [*Procedure for Resuming the Works*].

1.26 Emergency Response Plan

1.26.1. To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and as far as reasonably possible shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.

The Contractor shall the take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have reasonably avoided or overcome or lessened the effects.

NK-1: Can we delete one of two "reasonably possible" above?

Yes, delete as above

NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).

With the changes to your draft that have now been agreed, I have already modified JSS 2.7 and I thought that the above can now be deleted as shown, however your later comments against 1.26.5 are confusing me greatly and I am unsure. Can you please answer my request against 1.26.5 first and I can then modify the above if necessary.

1.26.2. The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

It is perfectly correct as it is however have split it .

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.26.3. Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage and flooding arising from such flooding, earthquake or volcanic activity.

NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.

Yes this can be changed as above

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and to any third parties and neighbours and property not connected with the Works but potentially affected thereby.
- (2) Provision of temporary support to all sides and soffits of excavations or portal-of tunnelling of sufficient strength, durability and suitability.

NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel.

My recommendation is still (as written) to leave it as it was and make this as wide a term as possible to increase the coverage. There is no acceptable definition of "portal" and this change just introduces argument on interpretation, why change?

NK: We accept to leave as it is.

- (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.26.4. Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*] and JSSS 1.9 [*Contractor's Method Statements*].

1.26.5. Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract.

NK: We consider that the Contractor may have difficulty to assume what activities can be made.

We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.

Which underlining? In 1.26.1?

Please see 1.26.6 for my assumption of your requirements.

Your draft has never been clear to me and I am still having difficulty to understand what your draft means and what are your intentions and requirements.

Please note:

- 1) *The Contractor can only plan for what he can reasonably foresee or anticipate and*
- 2) *It is necessary to state this so that no confusion is introduced with FIDIC GC 19.*
- 3) *This only leaves simple search and contact activities which has little or no meaning.*

JSSS cannot specify what other measures the Contractor is to take after a Force majeure event (which I guess your emergency plan is trying to cover) as these events and any counter measures cannot be predicted.

Please can you clarify exactly what you are requiring the Contractor to do in the event of an earthquake, hurricane, typhoon or volcanic activity, so I can finalise this clause and also JSSS 2.7.

NK: 1.26.5 はさらに検討すべきかと考えておりますが、とりあえずこのままで提出致します。貴機構のご意見がありましたらご教示願います。

1.26.6. The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels.

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

- 1.26.7. The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

- 1.26.8. Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on **the Site**.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

- 1.26.9. If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

- 1.26.10. The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.

- 1.26.11. For further measures and requirements refer to JSSS 2.7 [*Adverse Weather Requirements*].

1.27 Contractor's Safety Committee and Regular Safety Meetings

- 1.27.1. The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

- 1.27.2. Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.

- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of Contractor's Personnel.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.27.3. The HSO shall be the chairman of the Safety Committee.

1.27.4. The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Hazards, safety and health problems identified by any members of the Safety Committee;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **occurred in the previous month and measures to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

Is this sort of comment really necessary? Yes it can be changed but this is only an abbreviated sample agenda.

- (d) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (e) Safety instructions received from the Engineer;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country;
- (h) Safety and health awards, media attention and the like; and
- (i) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
- (j) Other matters.

NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion.

Again, is this sort of comment really necessary? I have changed this

1.27.5. Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.28 Engineer's Regular Safety Meetings

1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:

- (1) Frequency of the meetings: Once a month.

- (2) Agenda:
- (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **in the previous month** and measures **to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

Ditto above

Is the sequence here acceptable or shall it change as above?

- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Status of resolution of previous problems;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country; and
- (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.
- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.
- (5) The Engineer shall issue a formal instruction for any variation requests.

1.29 Project Safety Committee

1.29.1. On larger Projects with multiple contract packages and contractors and **unless otherwise stated** in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.29.2. Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.29.3. The Chairman of the Safety Committee **shall** be the Employer.

1.29.4. The Employer **shall** hold regular Project Safety Committee meetings, **on a monthly basis** unless otherwise agreed.

NK: JICA commented to delete this as holding meetings are not monthly basis but optional.

We propose "periodically as requested by the Employer" and ask you to reply to this comment as reply is not mentioned in the document with notes.

Please clarify what you want to be deleted.

NK: Deletion is “on monthly basis”.

1.29.5. The Employer **shall** prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

NK: JICA commented to replace “shall” with “may” in Clauses 1.29.3 to 1.29.5.

We want to ask you to reply to this comment as reply is not mentioned in the document with notes.

Please note that I have already edited the first paragraph to state “unless otherwise specified..”

With this change I think that no other change is necessary.

NK: MD 氏の回答をご参照願います。

1.30 Health and Safety Coordination with Other Contractors

NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer.

We propose to move them to the User Guide.

I disagree, this affects the Contractor also and it is important that it is stated here so that there is common and very clear legal agreement between Employer and Contractor on who does what.

I think that this requires mention in both JSSS and the User Guide to avoid future dispute.

Please also note my understanding that the User Guide is not a part of the Contract and please let me know if you require differently.

NK: MD 氏の回答をご参照願います。

1.30.1. Refer to GC 2.3 [*Employer’s Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer’s Personnel,
- (2) any other contractors employed by the Employer,
- (3) the personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor’s efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] and GC 4.18 [*Protection of the Environment*].

The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor’s Safety Plan and that their personnel comply with the Contractor’s Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.

When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.

1.30.2. The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer’s Personnel

will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.30.3. If any other contractors are employed by the Employer or if any legally constituted public authorities responsible to the Employer is working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: as and when considered necessary by Engineer.
- (2) Unless otherwise agreed, attendees shall include representatives of:
 - (a) The Employer;
 - (b) The Contractor;
 - (c) Other contractors employed by the Employer; and
 - (d) Personnel of any legally constituted public authorities.

NK: We considers it is easy to understand attendee by adding "who may be employed in the execution on or near the Site of any work not included in the Contract." to (d) though it mentioned in the first sentence.

I don't understand your comment, please advise what change you require (本Q&Aは無視願います。)

- (3) Agenda should relate to coordination among different contractors including for example:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;
 - (c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence;

NK: Are the phrases in red to be added?

See previous note

- (d) Status of resolution of previous problems;
- (e) Items to be coordinated with police, fire department and other related organisations;
- (f) Compliance and registration requirements under the Laws of the Country;
- (g) Safety and health awards, media attention and the like; and
- (h) Other matters.

1.30.4. Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the Engineer's monthly progress report.

1.31 Safety Statistics

1.31.1. The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.31.2. Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.

- (2) Near-miss: description, casualties, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff.
- (9) Number of Contractor's safety meetings and frequency.
- (10) Number of candidates given safety induction and other training.

NK: Are "candidates" replaced with "Contractor's Personnel"?

No, they are all candidates for training and can include others e.g. Employer's Personnel and others, etc.

- (11) Number of safety inspections,
- (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (13) Instructions issued for unsafe behaviour or unsafe site conditions.
- (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (15) Engineer's Instructions issued for work suspension.
- (16) HSO instructions issued for work stoppage.
- (17) Others.

1.31.3. All data shall be in a format and content given consent by the Engineer.

1.31.4. The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.31.5. The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [*Safety Reports*].

1.32 Safety Reports

1.32.1. The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.

NK Is it necessary to add "for"?

Yes, it can be

- (2) Contractor/HSO and Joint Site Safety Inspections.
- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [*Progress Reports*].

1.33 Health and Safety Records

1.33.1. The Contractor shall keep health and safety records for the following:

- (1) Accidents, fatalities, near-misses.
- (2) Inspection records and checklists.
- (3) Meetings for safety and health management.
- (4) Monitoring of safety and health management activities.
- (5) Health and safety education and training for the Contractor's Personnel.
- (6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
- (7) Work environment records and other records required by JSSS Chapter 2 [*General Safety Measures*] and other parts of JSSS.

1.33.2. All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.

1.33.3. A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [*Safety Reports*].

1.34 Health and Safety Incentive Schemes

1.34.1. The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.

NK: May we know if the word of "legitimate" (conforming to the law or to rules) is necessary?(対応済み)

We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.

Deleted see above.

1.34.2. It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.

1.34.3. It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.

1.34.4. Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.

1.34.5. Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.

1.34.6. The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.

1.34.7. As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.

1.34.8. The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [*Safety Reports*].

1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE

1.35.1. Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

1.35.2. The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by **the HSO (or his delegated and technically qualified assistant)** at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed **by the HSO**, thereby certifying the items as being **safe for use**.

NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system.

We want to ask you to modify the 1.35.2 as the above.

As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 [Supporting Staff] where this is explained.

I do not recommend your suggested change.

If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as **not being safe for use**, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

1.35.3. The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor.

If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.35.4. As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

- (1) New and up to date Personal Protective Equipment (PPE) and **other safety equipment** and **Temporary Works** of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.
- (2) **New or recent Contractor's Equipment and Temporary Works, not more than five (5) years old upon the date that it is mobilised to the Site**, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.

Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment by an independent testing, inspection and certification agency to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.

NK: We considers in actual basis as follows:

Q1: Is Scaffoldings classified in (1) TW? If so, no need to discuss the inspection of Scaffoldings before shipment? Shall Scaffoldings be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?

Steel and system scaffolding etc. is considered as Contractor's Equipment but other types may be TW. This is also not covered by Chapter 4 of your draft.

I have defined this is 1.35.1 and as it is an important item for which there should be no future argument.

Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffoldings, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.

Yes, see it includes all of these and yes much will be constructed or assembled at the Site but some major components (e.g. steel sheet piling, anchors, support systems and other components and materials) may be imported in which case this applies. Please refer also to definition in 1.35.1.

Can we delete "and Temporary Works" in (2)?

I do not recommend it.

Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.

This is not my recollection although it was mentioned as examples and my explanation covered all types of Contractor's Equipment.

We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies own old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too.

If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.

If you don't want pre-inspection at origin that is of course your choice. How to ascertain that it is compliant if there is no pre-inspection? It is too late when it arrives on site. I have given my suggestion and repeatedly explained this.

If JICA do not what this to apply, please let me have your instructions on what shall be changed and how.

We propose to delete the 2nd sentence above.

I do not agree for above reason but respect your wish. Just delete it.

In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."

JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair or maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."

There is no reason why anything should be added here and do not suggest that this is added as it is unnecessary duplication.

Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old.

The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?

JICA are paying market bid rates for the best most productive and safest equipment, why should this be compromised? I have already given my explanations and recommendation, please let me have your instructions on what this shall be changed to or if it shall be deleted.

Many contractors will definitely not like this age imposition because it is regularly abused in the pursuit of profit.

NK: JSSSに照らしまして上記をご参考に貴機構のご意見をお願い致します。

1.36 Health Matters

1.36.1. The Contractor is reminded of his obligations under GC 6.7 [*Health and Safety*] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.36.2. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the **Site**.

1.36.3. Occupational health care shall be provided by the Contractor and shall include for example:

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [*Working Environment*]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) Frequent or excessive manual handling of loads, stress and fatigue.
- (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability.

1.36.4. The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:

- (1) Health care staff to be assigned at the Site.
- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational **H**healthcare proposal.
- (6) Temporary water and power supply to maintain use during mains supply failure.
- (7) Type of communication facilities and measures for **emergency response**.

NK: May we know example of emergency response?

Please let me know what facilities you require and I will edit.

NK: We will further consider it.

1.36.5. Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on **the Site**.

1.36.6. Report of Serious Illness

(1) The Contractor shall inform the Engineer and submit details of any serious illness.

NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.?

It is up to you. Under GCC 6.7 The Contractor is required to maintain records and make reports concerning health matters to the Engineer as the Engineer may reasonably require. This is a further suggestion to try to reduce the volume and contents of report to be prepared.

Please see (4) following, the above can be omitted if required.

(2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.

(3) The report shall include details of the **HSO**'s recommended counter-measures.

NK: Is "HSO" replaced with Contractor as same as (2) above?

No, I do not recommend this. Please refer to the previous notes on this subject, the Contractor may send it but the Health and Safety Officer will prepare it.

(4) The Engineer is to be consulted on the types of illness for which reports are to be informed.

1.37 Design and Management of Temporary Works

1.37.1. Unless otherwise specified in the Particular Safety Specification, **the Contractor is** required to comply with BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.

Changed already

1.37.2. An alternative standard is acceptable by reference to JSSS 1.4.7 [*Specified Standards and Regulations*] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works including **Class A Falsework**.

NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specified specially referring to the following BS5975?

Section 1: General 1 Scope "This guidance is also applicable to the design of what is termed class A falsework 1) in BS EN 12812:2004, the design of which is for example specifically excluded from BS EN 12812:2004.

Please also refer to BS 5975, Foreword, page VII, penultimate paragraph:

The European standard on falsework, BS EN 12812, exists in parallel with this British Standard. It specifies performance requirements for the design of falsework in accordance with one of three classes: A, B1 and B2. Limit state design methods are specified for design classes B1 and B2. It does not provide guidance for the structural design of Class A. It is recommended that Section 3 is used to provide guidance for Class A falsework.

It appears to follow that BS EN 12812 is not necessarily an acceptable alternative for example because Class A is excluded, I have assume therefore that it is necessary to state the need for Class A Falsework.

Please be aware that I have not reviewed or studied the BS in detail so please do not assume that I have. I do recommend that it is studied by JICA and NK to ascertain that it is applicable.

*Previous clause 1.34.3 regarding alternatives is not now required as I have drafted and included JSSS 1.4.7 [*Specified Standards and Regulations*] to cover this generally.*

Previous clause 1.34.6 has already been deleted.

There is no need for the suggested insertion into the following clause (previous Clause 1.34.7) as per Ito san's comment.

- 1.37.3. It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.
- 1.37.4. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.
- 1.37.5. The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.

~~1.37.6. Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [Health and Safety Officer at the Site (HSO)].~~

JC: JICA commented as follows:

Issue 6 1.34.8 Too much to require the Contractor name all the specialist staff at the Bid stage. It is also excessive to require consent of the Engineer for those specialist staff.

"Necessary qualification" can be combined with 1.34.12 or 1.34.13.

Issue 6 1.34.9 If comply with JSSS1.9, all the specialist staff shall be appointed before the commencement, and subject to the Engineer's consent.

NK: From this comment, the 1.37.12 below is enough requirement. 1.37.6 above specifies to refer to 1.12, which 1.12 is for HSO, it seems difficult to apply for personnel of TW.

As 1.3.12 specifies requirement and necessity of consent of the Engineer, we propose to delete 1.37.6.

I understand your comment and have no objection to the deletion of 1.37.6

- 1.37.7. Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [Contractor's Method Statements]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer has no obligation under the Contract to review Temporary Works design, however he may choose to do so for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975. The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [Engineer's Duties and Authority] Sub-Subclause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.

I have given further thought to the following clause which was originally considered as an exception. I am now of the opinion that offering such alternative to an Employer to state his requirements in the PSSS is not a good idea as it may result have a negative effect.

Most JICA funded projects are large projects and will have a Temporary Works content.

I suggest that the following alternative clause should be deleted to make these important requirements very clear.

If there is only a small and simple TW content, even if the BS 5975 is applied it will not cause any major harm or cost.

The sample specification provided some time back by JICA for the Hong Kong Project showed that all work shall comply with the BS.

NK: MD氏は上記の理由で次の1.37.8の条項は不要であると考え削除を提案しています。ご検討をお願いします。

~~1.37.8. Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:~~

- ~~(1) Appointment of appropriately qualified and experienced staff.~~
- ~~(2) Preparation of adequate Temporary Works designs.~~
- ~~(3) Independent internal or external checking of the Temporary Works Design.~~
- ~~(4) Preparation of a Temporary Works register and records~~
- ~~(5) Pre erection inspection of all Temporary Works, including materials, components and equipment.~~
- ~~(6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to:
 - ~~(a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO Contractor of a suitable sign showing it is complete and safe to use; and~~
 - ~~(b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO Contractor of a suitable sign showing that it is ready for dismantling.~~~~

NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause,

we consider HSO will be replaced with Contractor as JICA commented:

Should it be HSO? When BS5975 applies. TWC/TWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?

The above applies when BS 5975 doesn't therefore I suggest (subject to JICA and NK agreement) that this can be deleted.

However, yes, the Temporary Works staff are all involved to make sure that the Temporary Works are designed and executed correctly, however the HSO is ultimately responsible for ALL safety on the Works and nothing should avoid his overview. I recommend that this should remain as HSO, I believe that it is a correct requirement which in practice should not be more than a counter signature.

1.37.9. **In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel],** the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.

NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?

I understand and agree with your comment. However, JSSS 1.18 gives rules for the proper placement of Contractor's Personnel and it probably better therefore to rephrase this as above.

The following clause can be deleted

~~1.37.10. For further information on Method Statements refer to JSSS 1.9 [Contractor's Method Statements].~~

1.37.11. For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].

~~1.37.12. Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties. and shall obtain the consent of the Engineer.~~

NK: We think 1.3.12 is too long sentence to clearly understand requirement.

Yes I agree and have reworded this as above.

Q-1 Is consent by the Engineer given to specialist staff?

This part can be deleted.

Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?

We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.

I have reworded all, please refer to the above

1.38 User Training

NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

I recommend that it be included here as a default requirement.

NK: 貴機構のご意見はいかがでしょうか？

1.38.1. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.

1.38.2. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.

1.38.3. User Training shall vary according to the scope of the Works however it shall generally cover the following:

- (1) Safe system and Plant use, operation and process control.
- (2) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements
- (3) Training in use of all hardware and software packages.
- (4) Laboratory control (sampling and analysis) including operation of laboratory equipment.
- (5) Recording and reporting.
- (6) Emergency operation procedure.
- (7) Maintenance management procedures.

- (8) Inventory and store control systems.
 - (9) Particular safety procedures, including:
 - (a) Safe working procedure;
 - (b) Housekeeping of the facilities;
 - (c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and
 - (d) Safety measures for the Works and all items of Plant.
- 1.38.4. Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.
- 1.38.5. The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.
- 1.38.6. Other requirements for User Training
- (1) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.
 - (2) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.
 - (3) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.
 - (4) The Engineer may choose to send representatives to witness the training.
 - (5) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.
 - (6) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.
 - (7) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty-six (56) days before any training commences.
 - (8) Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.
 - (9) The Contractor shall use visual media as much as possible throughout the training process.
 - (10) Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.
 - (11) The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.
 - (12) Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.
 - (13) The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his

- required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.
- (14) The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.
 - (15) Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.
 - (16) The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty-six (56) days.
 - (17) Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week-days.
 - (18) Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.
 - (19) The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.

1.39 Unexploded Ordnance (UXO)

NK: we considers JICA may not specify 1.39 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

MD's reply: The Employer should inform the Contractor of the likely existence of UXO and if possible remove. The Contractor shall report any UXO then found to the Employer/Engineer for further instruction. This needs to be included in JSSS and the User Guide so that both parties are aware of the other's obligations. I have edited this to make the Employer responsible and have and separated accordingly.

NK: We have no comments to 1.39. xd v

For your further information, please note that this is an Employer's Risk under GC 17.3 (d).

The problem is, that GC 17.3 places no obligation upon the Employer (who should be more aware than anyone of the possible risk) to advise of the existence, to survey and remove such UXO before bidding or after if then encountered.

This is the reason behind including this in JSSS.

This clause may need some slight modification when I again work on the User Guide.

NK: 貴機構のご意見はいかがでしょうか？

1.39.1. If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and

the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.

- 1.39.2. Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.
- 1.39.3. Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.
- 1.39.4. Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.
- 1.39.5. Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy of the further clearance certificate together with any further instructions from the Engineer.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:

- (1) “**Executing Agency**” means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer.
- (2) “**GC**” and “**PC**” followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) “**Health and Safety Officer**” or “**HSO**” means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [*Health and Safety*] as construed in accordance with JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].
- (4) “**JICA Standard Safety Specification**” or “**JSSS**” means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works.
- (5) “**Method Statement**” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] and supplemented by JSSS 1.9 [*Contractor’s Method Statements*].
- (6) “**Operation Leader**” (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations and who can also be referred to within the OSHA definition as a “Competent Person”.
- (7) “**OSHA**” means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- (8) “**Particular Safety Specification**” means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project as illustrated in Annex 1.4 [*Figures and Illustrations*].
- (9) “**Project Safety Specification**” means the document that contains Part 1 [*JSSS*] and Part 2 [*Particular Safety Specification*] as illustrated in Annex 1.4 [*Figures and Illustrations*].
- (10) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (11) “**Safety Plan**” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the

entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor's General Obligations*] as supplemented by JSSS 1.7 [*Contractor's Safety Plans*].

(12) “**Safety**” shall also mean “occupational health and safety” and “health and safety”.

(13) “**User Guide**” means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.

NK: There is no “User Guide” specified in JSSS. Does it necessary to define it in JSSS?

I think as it will be published on line probably at the same time as JSSS, it does need definition and more importantly, it requires a clear statement in JSSS, that it is NOT a part of the Contract (see added clause JSSS 0.)

It is my understanding that the User Guide is for the reference of the Employer only and it is probably also a good idea therefore to describe it as “An Employer’s Guide” or something like that to make it very clear.

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

- (1) “**Accident Response**” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [*Accident Response Plan*].
- (2) “**Confined Spaces**” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Cofferdam**” means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.
- (4) “**Dangerous Goods**” means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols. classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (5) “**Dangerous Work**” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.
- (6) “**Diver**” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.

For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [*Diving Works*].

- (7) “**Earthwork Support**” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.
- (8) “**Elevated Access Structures**” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.

- (9) “**Emergency Response**” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.26 [*Emergency Response Plan*].
- (10) “**Falling Objects**” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.
- (11) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (12) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (13) “**Hazardous Substances**” means any substance, whether solid, liquid or gas, that may cause harm to health.
- (14) “**Hazardous Areas**” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as **Zone 0, Zone 1 or Zone 2, where:**
- (a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;
 - (b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and
 - (c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.

NK: May we know the source of Classification?

May we know if this Zones are specified in JSSS?

Classification of Zones is from the Technical Measures Document of HSE.

<https://www.hse.gov.uk/comah/sragtech/techmeasareaclas.htm>

OSHA also have a classification which is more complicated.

Please be aware that in the absence of information in your draft, this is my suggestion but in every case and I rely on JICA and NK to check and confirm this. If you do not want to use this, please advise me and I will delete.

NK: 再考いたします。(現時点ではJSSSでは規定していません。)

- (15) “**Hoisting Operation**” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.
- For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [*Hoisting and Rigging*].
- (16) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.
- (17) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level.
- (18) “**Personal Fall Restraint System**” or “**PFRS**” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of

workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.

- (19) “**Personal Protective Equipment**” or “**PPE**” means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.
- (20) “**Safety Belt**” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.
- (21) “**Safety Harness**” means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.
- (22) “**Scaffold**” or “**Scaffolding**” means a temporary structure or structures that provide access on or from which persons work or to support Goods.
- (23) “**Skill Training**” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (24) “**Spotter**” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*].
- Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.
- (25) “**Trade Effluent**” means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.
- (26) “**Unexploded Ordnance**” or “**UXO**” shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.
- (27) “**User Training**” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.
- (28) “**Working Platform**” means a platform on or within a scaffold that is intended and designed to support persons or Goods.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

AED	Automatic External Defibrillator
BMGV	Biological Monitoring Guidance Values
CPR	Cardiopulmonary Resuscitation
ODA	Official Development Aid
OJT	On Job Training

PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings
TWA	Time Weighted Average
WEL	Workplace Exposure Limits

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ACI	American Concrete Institute
ANSI	American National Standards Institute.
ASHTO	American Association of State of Highway Transportation Officials
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials.
BS	British Standard.
BS EN	British Standard European Norm.
HSE	UK Health and Safety Executive.
ISO	International Organisation for Standardisation.
ILO	International Labor Organization.
JIS	Japanese Industrial Standards.

A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.

Annex 1.2: Content of Bid Stage Safety Plan

~~A1.2.1 This Annex lists the required content for the Bid Stage Safety Plan which is to be provided in accordance with “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA). The Safety plan is to be included in the Bidding Documents Part 1—Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF 39.~~

NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?

I think both are useful as the contractor should also be aware of requirements.

It is very important that the Employer/Consultant are prevented from altering the detail of this Annex in their Bidding Documents in any way, as all items are required in the Bid Stage Plan, all are coordinated with JSSS, the same structure, terminology and numbering must be used.

I suggest that this will be reworded something like the following, which I will do when go back to work on the User Guide further:

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor’s Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder’s intentions, so that this can be understood and properly evaluated.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder’s corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder’s head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder’s Personnel

A description of the health and safety management organisation at Site headed by the Bidder’s Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor’s Personnel involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety

management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Bidder's Safety Management System

Refer to JSSS 1.5 [*Contractor's Safety Management System*]

Confirm which scheme the Bidder is accredited under.

(6) Temporary Works

Refer to JSSS 1.37 [*Design and Management of Temporary Works*].

A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.

NK: JICA added "outline" in the last comment.

OK I have amended

(7) Temporary Facilities on Site

The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)

NK: We consider that the above sentence is independent clause from (6) above and locate in some place.

I have edited as above

(8) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.

(9) Safety Plan for the Works

NK: May the title be Works?

I have edited as above

A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.

(10) Safety Plan for Dangerous Work.

Refer to JSSS 1.22 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [*Definitions and Abbreviations*] and GC 4.1 [*Contractor's General Obligations*].

(11) Permit to Work System

Refer to JSSS 1.23 [*Permit to Work System*]

A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.

(12) Safety Measures for Contractor's Equipment

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after

arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(13) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.34 [*Health and Safety Incentive Schemes*]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.

(14) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(16) Site Inspection Plan

A description of the methods for Site inspections by the HSO, types of inspection and frequency.

The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work

(17) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.

(18) Policy for Preventing Traffic Accidents

A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.

(19) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(20) Accident Response Plan

Refer to JSSS 1.23.1 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.

~~It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.~~

NK: We consider that the above sentence is independent clause from (19) above and locate in some place.

Deletion is OK

(21) Health Care Plan

Refer to JSSS 1.36 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(22) Fire Response Plan

Refer to JSSS 2.8 [*Fire Prevention*]

Details of the fire prevention services to be provided at the Site.

The Fire Response Plan required by JSSS 2.8 [**Fire Prevention**].

(23) Emergency Response Plan

Refer to JSSS 1.26 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(24) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [*Contractor's Safety Management Activities*]).

(25) Safety Induction Training

Refer to JSSS 1.20 [*Safety Induction Training*]

An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(26) Skill Training

Refer to JSSS 1.21 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.

(27) User Training

Refer to JSSS 1.38 [*User Training*]

An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.

(28) Legal requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.

Annex 1.3: Additional Contractor Forms

Attached Forms:

Form JSSS/BSD - Bidder's Safety Declaration

Form JSSS/SAR - Sample Accident Report

Form JSSS/BSD - Bidder's Safety Declaration

[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]

I, [insert name and position of authorised signatory], being duly authorised by [insert name of Bidder/members of joint venture (“JV”)] (hereinafter referred to as the “Bidder”) to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.

The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.

The Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder declares that he will mobilise for use upon the Works:

1. New and up to date PPE and other safety equipment **and Temporary Works** of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment **and Temporary Works** (not more than **five (5) years old**, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.

Please refer to my recommendations and notes in 1.35 and advise me of your requirements

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability.
3. Fully inform workers about hazards;
4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on **the Site, in** a language and vocabulary they can understand.
5. Keep accurate records of work-related injuries and illnesses.
6. Perform tests in the workplace, such as air sampling as required by the Safety Specification.
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.

8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.
9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract.
10. Post injury and illness information and data where workers can see them.
11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site*)

Or

Bidder's Head Office Health and Safety Manager*)

Name:

Date: _____

(*Delete as applicable)

Form JSSS/SAR – Sample Accident Report

[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality) (If casualty(ies) is(are) belonging to subcontractor,) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	
8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	

(above to be inserted before all reports)

FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location of accident occurrence:	
4) Brief background and apparent cause:	
5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
6) Physical damages to the Works, Site and any properties of the third parties	
7) Present medical status of casualty(ies):	
8) Present work status:	
9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
10) Accident Report Submission Date	

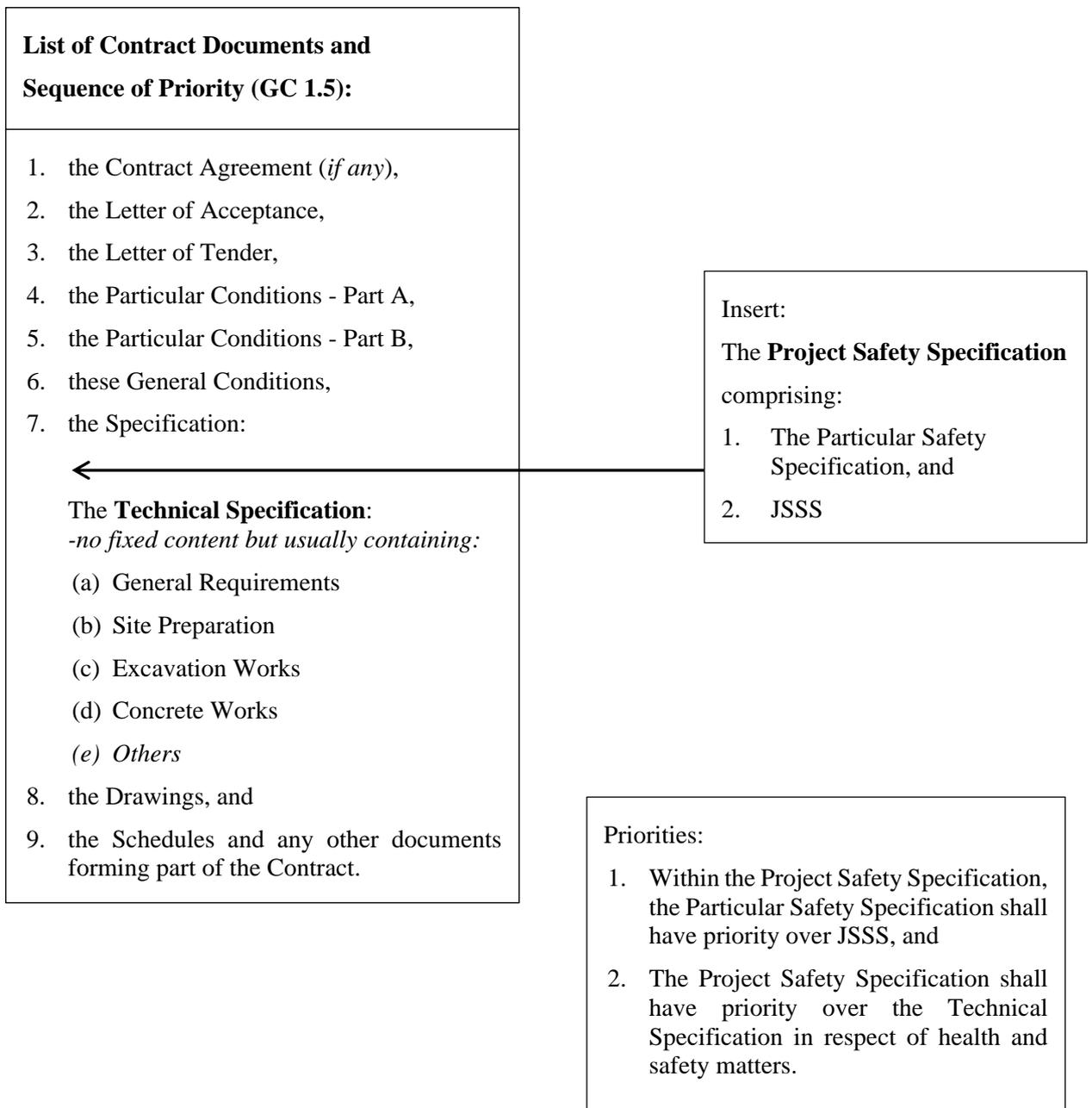
Annex 1.4: Figures and Illustrations

Attached Documents:

Fig A1.4.1 Incorporation of JSSS in Bid and Contract Documents

Fig. A1.4.1

Incorporation of JSSS in Bid and Contract Documents



Yellow marking and red letters : Comments by NK (20200319) & (20200327)
Green – subsequent changes made by DCI, *Replied to NK inquiry and added DCI notes* (20200325)



JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE ODA



**Japan International Cooperation Agency
(JICA)**

_____, 2020

Prepared: DCI for NK
Issue: 7 (updated)
Revision:
Date: 25/03/2020

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ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:

- 1) Japanese Acts, Orders and Ordinances including:
 - Industrial Safety and Health Act
 - Order for Enforcement of Industrial Safety and Health Act
 - Ordinance on Industrial Safety and Health
 - Safety Ordinance for Cranes
 - Ordinance on Safety and Health of Work under High Pressure
 - Ordinance on Prevention of Anoxia, etc.
 - Ordinance on Prevention of Hazards Due to Dust
 - Explosives Control Act
 - Order for Enforcement of Explosives Control Act
 - Ordinance on Explosives Control
- 2) OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- 3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.
- 4) **The International Red Cross and Red Crescent Movement (ICRCM)**
NK: In 2.9.2 First aid kit: ANSI Z308.1 is referred to. Is the above 4) necessary?
True: ANSI is the kit but first aid courses will also be necessary (see added clauses in Section 2.9 and Chapter 10 also). ICRCM seems to be a convenient and internationally applicable basis.
- 5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)

Suggestion for JICA:

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JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

Draft
Requires further
coordination

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	2.6	Falling Objects
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5. Hoisting and Rigging	5.1	General Requirements
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6. Temporary Works	6.1	General Requirements
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	6.4	Walkways, Ladders and Stepladders
	6.5	Scaffolding
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	6.7	Temporary Electrical Installations
	6.8	Electric and Gas Welding and Cutting
7. Excavation Works	7.1	General
	7.2	Particular Safety Measures
	7.3	Manual Excavation
	7.4	Excavation by Blasting
8. Foundation Piling Works	8.1	General
	8.2	Particular Safety Measures
9. Concrete Works	9.1	General
		Particular Safety Measures for Insitu Concrete Work

	9.2	Reinforcement
	9.3	Formwork (including Falsework)
10. Diving Works	10.1	General
	10.2	Dive Safety Plan
	10.3	Personnel for Diving Operations
	10.4	Diving Equipment, Tools, Facilities and Workboats
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	10.6	Diving Accident Control Plan
11. Railway Works	11.1	} <i>Excluded - to be included in JSSS Second Edition)</i>
12. Road Works	12.1	
13. Bridge Works	13.1	
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JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

**Japan International Cooperation Agency
(JICA)**

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

1.1 Safety Declaration

1.1.1. Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.

1.1.2. **A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.**

NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance 1.3 and modify the 1.1.2 as follows:

1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Declaration.

This is specifically a Bid form to be submitted with the Bid and the wording is correct. Actually, this does require a change to the JICA Standard Bidding Document as included in our earlier draft but JICA do not want to do this.

I have modified the User Guide to state this but the same problem will arise, the User Guide requires the Executing Agency to change the Bidding Documents but the SBD prevent this.

If JICA do not change the SBD this will continue to be a problem and for now all else must therefore be an unsatisfactory compromise.

NK: MD 氏は上記のように SBD の様式の追加は認められていないが、User Guide に含めました。請負者の安全宣言の様式を User Guide に含めることは、SBD の規定上、問題ないでしょうか？

1.2 General Reference Notes

1.2.1. For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].

1.2.2. The following further general reference notes apply to the content of JSSS:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
- (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an **equivalent alternative** diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.

(6) **Unless otherwise stated in JSSS or the context is otherwise clear,** any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of the same

コメントの追加 [伊藤1]: In this chapter 1, the expression “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site” which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better:

1. With this additional wording, simply say “the Contractor’s Personnel” or
2. Without this additional wording, every time repeat “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works”

such health and safety measures for Employer's Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.

NK: There are many descriptions of "other the Site areas (if any) where the Works are being executed" in JSSS. GC defines as 1.1.6.7 "Site" means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.(NK のコメントにより、すでに削除済ですが、Q&A は残しました。)

May we know the following?

Q1: Which places you are assuming as other places?

Q2: Are other places specified in the Particular Safety Specification?

Other places may be specified in the Contract as forming part of the Site such as offsite storage areas provided by the Employer or Employer's and Engineer's compounds and facilities all of which may be remote from the Site but for which the Contractor still has the usual obligations such as care, insurance, maintenance, etc.

This is obviously creating difficulty with interpretation, so I have deleted all such reference in JSSS and it now constantly refers to the Site only. This will also be considered for mention in the User Guide

- (7) Any reference in JSSS to "relevant authority" or "relevant authorities" shall mean one of more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.
- (8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

~~1.3.1~~ JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The "Project Safety Specification" shall have priority over the other parts of Specification in respect of health and safety matters. Within the "Project Safety Specification" the Particular Safety Specification shall have priority over JSSS, as illustrated in Annex 1.4: [Figures and Illustrations], Fig A1.4.1 [Incorporation of JSSS in Bid and Contract Documents] and as follows

~~1.3.2~~ JSSS shall be included as a part of the Specification for the Works, which shall be subdivided into two parts namely:

~~1.3.3~~ The Project Safety Specification (including JSSS); and

~~1.3.4~~ The Technical Specification

1.3.5. The priorities of the document comprising the Specification are as follows:

1.3.6. Within the "Project Safety Specification" the Particular Safety Specification shall have priority over JSSS;

~~1.3.7.1.3.1.~~ The "Project Safety Specification" shall have priority ~~over the~~ Technical Specification in respect of health and safety matters.

NK: Q1: We think it needs to explain/define "Technical Specification" as same as User Guide 1.3.2 (3) The "Technical Specification" shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safety.

コメントの追加 [岡本2]: Safety measures are needed not only in the Site.

We would like to have advice of NK/MD. The current draft JSSS says:

A: the Site (very often) and
B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above.

Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:

"Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works".

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat "the Site and other places (if any) where the Contractor intends to execute the Works" every time. But this is too long, so a bit awkward.

How do you think?

コメントの追加 [岡本3]:

Better to avoid using "Technical specification"

Fig A1.4.1 moved to User Guide.

Yes I agree but the problem again is that "Specification" is already defined in the General Conditions of Contract and any change should be therefore be through a Particular Conditions change but JICA do not want this.

I have added the explanation as above but please note that this is a compromise.

Q2: Is "other parts of" necessary?

Thank you and no, it isn't, see above. (すでに削除済みです。)

1.3.8.1.3.2. The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.

I recommend that the following is necessary

The User Guide shall not form a part of the Contract.

NK: : MD氏は上の追記を提案していますが、入札図書として出てこないのので不要と考えます。

1.4 Compliance with JSSS and Other Regulations

1.4.1. JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.

1.4.2. JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

1.4.3. The Contractor shall comply fully with the requirements of ~~JSSS~~ **Projectas supplemented and modified by the Particular** Safety Specification.

~~1.4.4. Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer's Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.~~

~~1.4.5.1.4.4. Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply.~~

NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?

It is intended to be for the situation where JSSS has been agreed to be use, but it is lacking in some areas in which case we use the Laws.

~~1.4.6.1.4.5. If, for the particular part of the Works, the Project Safety Specification does not contain safety requirements and there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable safety measures in the Safety Plans; internationally acceptable safety regulations for the Engineer's consent. These may contain proposing application of internationally recognised standard or regulation.~~

NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?

It is intended for use where we have dropped back to the Laws but there are no particular Laws available.

I have no objection if both are deleted.

NK: 1.4.5 と 1.4.6 を合わせた次のような規定ではいかがかと考えます。

If there are no or insufficient safety provisions in the Laws of the Country and in JSSS and the Particular Safety Specification for the particular part of the Works, and if the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent. (subject to MD's review.)

1.4.7.1.4.6. Specified Standards and Regulations

(1) *Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date.*

(2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting

コメントの追加 [伊藤4]: Not necessary

コメントの追加 [岡本5]: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.

コメントの追加 [岡本6]: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6

コメントの追加 [伊藤7]: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.

コメントの追加 [J8]: Better to add this in the main text of JSSS as mentioned in A1.1.5

particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.

~~(+)(3)~~ Application of detailed parts of standard or regulation specified in JSSS may be waived at a formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.

~~(2)(4)~~ Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

~~1.4.8.1.4.7.~~ Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".

~~1.4.9.1.4.8.~~ If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:

- (1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.
- (2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear.

~~1.4.10.1.4.9.~~ Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion and Defect Notification Period, during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification.

NK: We consider that this phrase may be changed to "and the Defects Notification Period"? (Though the phrase is correctly expressed.)

No, your suggested change would not be correct this has been especially drafted following JICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).

The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer's property except as stated in this clause.

NK: we agree to leave this as specified.

~~1.4.11.1.4.10.~~ The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.

1.5 Contractor's Safety Management System

1.5.1. The Contractor shall institute a health and safety management system in accordance with ~~OHSAS 18001 or ISO 45001:2018.~~ The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.

コメントの追加 [伊藤9]: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of "waiver" should be provided.

コメントの追加 [岡本10]: We don't really understand the meaning of this. ????

コメントの追加 [伊藤11]: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.

With this modification, Particular Safety Specification in User Guide will not be necessary any more.

コメントの追加 [伊藤12]: OHSAS does not exist any more??

Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.

~~1.5.2. The Contractor shall state the applicable standard in the Contractor's Safety Plan.~~

コメントの追加 [伊藤13]: If delete OHSAS above, delete accordingly

~~1.5.2. The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation. Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17.~~

コメントの追加 [伊藤14]: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.

1.5.3. The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.

NK: JICA deleted 1.5.3 in the last comment because JICA wants for the Contractor to institute and operate HS management system but not request submission of certification. (actually and practically certificate is not much important). We think 1.5.3 should be deleted.

I have deleted the requirement with the Bid (see Annex 1.3), however if the contractor is to comply with a scheme how does the Engineer know which scheme and how to verify compliance?

It has no little or no meaning otherwise.

NK: JICA intention is only to apply the safety management system excluding the certification and auditing by the certification body. Therefore, 1.5.3 is considered not request certification. この考え方で正しいでしょうか?

1.6 Checking and Validation of Submissions

1.6.1. In accordance with GC 4.9 [Quality Assurance] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination, design and supervision staff and any independent checkers as appropriate.

コメントの追加 [伊藤15]: coordinator?

NK: Is this correct that we think 1.6.1 is added in relation with design of TW, etc.?

Not only TW it also applies to his Safety Plans, Method statements, any shop or working drawings. In fact any Contractor submissions are stated.

~~1.6.2. For the purposes of interpretation for JSSS, the final paragraph of GC 1.8 [Care and Supply of Documents] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible.~~

コメントの追加 [岡本16]: MD氏の intention は全ての submission について ISO9000 プロセスのような手続きを採用するように求めている。個人的には賛成するものの日本の会社は全般にわたる document control はできないので無理な要求と思量。

NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.

This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. I believe that with the increased amount of submissions such as method statements, safety plans and temporary works details, there is an increased possibility that the Engineer could comment but chooses not to or even overlooks or misses, errors. If this happens there is the risk of avoiding responsibility if an error or defect (what is this?) should have been discovered.

It is a strange but potentially onerous obligation that is inconsistent with GC 4.9 even if 1.8 does not state the consequences: GC 1.8 states: "If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect."

コメントの追加 [伊藤17]: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1). Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor. We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".

NK: 貴機構のご意見はいかがでしょうか?

1.7 Contractor's Safety Plans

1.7.1. The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.

1.7.2. The Safety Plans shall set out or refer to all the health and safety requirements:

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- (1) that are stated in JSSS;
- (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and
- (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site

コメントの追加 [伊藤18]: See 1.2.2 (6)

1.7.3. The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:

- (1) Bid Stage Safety Plan (Outline Overall Safety Plan).
- (2) Commencement Stage Safety Plan (Updated ~~Overall~~ Bid Stage Safety Plan)
- (3) Particular Safety Plans (Updated) separate plans if necessary for particular parts of the Works

NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.

I don't quite understand your comment, the Bid Stage Plan is followed by an updated plan after Commencement but this is still an early plan and the same plan (or parts of it) will probably require to be further revised and updated as the detail of works develop and before any parts of the works commence.

NK: We understand your meaning.

1.7.4. The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level. ~~throughout the Time for Completion of the Works.~~

~~1.7.5.~~ Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility. ~~and at any time throughout the Time for Completion of the Works.~~

NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?

Yes thank you, that is true, but better to delete the phrase rather than add.

1.7.6. Bid Stage Safety Plan:

- (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [*Content of Bid Stage Safety Plan*].
- (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

1.7.7. Commencement Stage Safety Plan

- (1) This shall be submitted within twenty-eight (28) days ~~after~~ the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site,
- (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.
- (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.

NK: Is it not necessary to specify to review Commencement Stage SP?

Can we consider Commencement Stage SP is not be reviewed and the Engineer may review it and give comment in accordance with GC 1.8 Care and Supply of Documents though Japanese draft is specified to review it within 14 days?

Fair comment: I had modified the following clause 1.7.8 to deal with Particular Safety Plans. The Commencement Stage Safety plan is another contract stage submission subject to the same procedures so I have added it there.

Please also note the above correction to the submission date of the plan which should be twenty-eight (28) days after the Commencement Date.

1.7.8. Particular Safety Plans

- (1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.

1.7.9. Procedures for Submission and Review

- (1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works.
- (2) The Contractor shall submit:
 - (a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].
 - (b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.

コメントの追加 [岡本19]: Should it be "of the Works or any part thereof" ?

NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?

I have changed this

Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP.

We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan

I disagree; many of the items mentioned in Issue 6 are to be included in the Method statement and all other items are included in Annex 1.3 all of which will be progressively developed. There is no need to include additional information here.

NK: understand.

- (3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:
 - (c) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;
 - (d) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and
 - (e) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of

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the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.

- 1.7.10. The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.
- 1.7.11. Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.
- 1.7.12. The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.

1.8 Risk Assessment

- 1.8.1. In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.
- 1.8.2. The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.
- 1.8.3. The procedural flow of risk assessment shall be as follows.
 - (1) Identifying hazards.
 - (2) Evaluating risks.
 - (3) Determining measures of risk reduction or elimination.
- 1.8.4. The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:
 - (1) Removal of hazards such as eliminating dangerous methods of construction.
 - (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
 - (3) Engineering measures.
 - (4) Management measures including improving skills with additional training.
 - (5) Use of PPE.

NK: May we know what "improved PPE" mean?

Deleted

1.9 Contractor's Method Statements

- 1.9.1. The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.
- 1.9.2. Method Statements shall be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and include details of all Permanent Works and Temporary Works with supporting documents such as:
 - (1) Studies, investigations and designs.

NK: We suggest to change to "Studies, investigations, and designs"?

Changed

- (2) Structural calculations and any other calculations.
- (3) Specifications and technical details.

コメントの追加 [伊藤20]: Better to have a linkage with the risk assessment.

- (4) Proposed construction procedure, sequence and method.
- (5) Construction resources including **superintendents, workers, operation leaders** and Contractor's Equipment.

NK: We consider "worker" will be used because it is used in other Chapter though FIDIC uses "labour".

Ok I have changed anyway but it now needs wider wording, labour is also used in FIDIC

- (6) Inspection and monitoring plan.
- 1.9.3. The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.
- 1.9.4. Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.

Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:

- (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.
- (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.
- (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.
- (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.
- (5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.

NK: We consider "for his information" can be deleted because this phrase is not used for Safety Plan though Issue 6 used it.

Changed.

1.10 Engineer's Safety Representative

- 1.10.1. ~~Unless otherwise specified in the Particular Safety Specification, the Engineer may delegate his power and authority to any of his assistant's delegated representative~~ at the Site who shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS.
- 1.10.2. The terms of the appointment shall be in accordance with GC 3.2 [*Delegation by the Engineer*].
- 1.10.3. Whenever the term "Engineer" is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.

コメントの追加 [伊藤21]: Particular Safety Specification is not necessary with this modification.

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1.11 Safety Compliance Instructions from the Engineer

- 1.11.1. Without affecting or diminishing the Contractor's responsibility under GC 4.1 [*Contractor's General Obligations*] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.
- 1.11.2. If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [*Suspension of Work*] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.
- 1.11.3. If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer's consent and implemented such measures to ensure that no such accident can reoccur.
- 1.11.4. The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

コメントの追加 [岡本22]: The sentence is not complete???

1.12 Health and Safety Officer at the Site (HSO)

1.12.1. For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7 [*Health and Safety*], shall be construed as "Health and Safety Officer at the Site".

NK: HSO is defined in A1.1.1(3), so can 1.12.1 be deleted?

No: This is necessary to correspond to the definition.

Please note that this is a compromise. PC change would have been preferable.

1.12.2. Requirements for the HSO:

- (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.
- (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [*Contractor's Personnel*], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [*Health and Safety*].
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [*Law and*

Language], it is acceptable for the HSO to use a translator for either or both of these languages.

- (7) Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management.

- (8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country, and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.

コメントの追加 [岡本23]: To NK: Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia

NK: We considers NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot not find such person. Large contractors and European contractors may find them.

We propose to add (7) "unless otherwise specified in Particular Safety Specification" before "the HSO..."

I have split this clause for clarity.

I suggest that NEBOSH is OK as it is because an equivalent alternative is acceptable (see use of this term in JSSS 1.4.7).

It is also subject to receiving the consent of the Engineer.

NK: We think "two (2) years experience outside the Country" is also too high requirement for the local contractors and also Japanese.

We propose to delete "this two years outside the Country" and specify requirement in Particular Safety Specification depending on the Works.

I suggest that it is better to state here as a basic standard. If JSSS cannot specify a general standard, the choice of Executing Agencies will vary greatly. I will draft a relevant clause for the User Guide but please note that I have reduced the experience requirements and deleted the international requirements.

1.12.3. Supporting Staff

NK-1: JICA commented and minutes recorded in January as follows:

7.1.1 (5) HSO's duties:

JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.

No this is not a correct understanding, the HSO duties and obligations are far wider which is why this clause is correct and necessary

Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?

Yes, he will be very busy which is why he must be qualified and experience and given the full support staff that he requires and why he must receive the support of other Contractor's Personnel particularly Operation Leaders, all as stated herein

MM: HSO should always be ultimately responsible as the leader really of the Contractor's safety team with support duties delegated as necessary to a number of personnel including Operation Leaders. This is described in Chapter 1.10.1 and has been discussed. No change is required.

NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:

3. Common requirements in JSSS

- (4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の “The HSO shall inspect work area before starting work...” は、“The Contractor shall ...”へ変更する。

HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.

From this idea, the HSO in the sentence “The HSO shall inspect work area before starting work...” shall be replaced with “the Contractor”.

Please let me review the Excavation comments when I receive them, however this looks correct as he is responsible for inspecting the safety arrangements, even if another person does the inspection on his behalf. It needs no change but the work will not always be directly inspected by him, he can and will delegate but he is singularly responsible and will sign it off.

NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).

We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor's Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.

Based on the above idea, we want to revise some sentences below.

- (1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.
- (2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.

NK: We propose to delete (2) from the idea of mentioned above NK-3. The supporting personnel shall be full time assignment. The Contractor shall establish system of daily check by the site staff or designated personnel for check by the Contractor and reporting by the site manager to the HSO.

I think that (2) is clear, correct and necessary. Please refer to the following clauses also. It can be full time assistants or other Contractor's Personnel also who shall check certain aspects and who shall also have other responsibilities given to them by the HSO.

NK: MD 氏は、まだ supporting personnel についての貴機構の意見をまだ十分理解していないように感じておりますが、貴機構のご意見はいかがでしょうか？

- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) The HSO shall be expected to develop internal procedures whereby all supporting personnel shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.
- (6) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

コメントの追加 [岡本24]: MD 氏は十分に理解しつつ Operation Leader などのサポートを言っていると思量。(例えば下記の(5)など)

コメントの追加 [伊藤25]: It is understood “internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO.....”

But how “and the details of any inspection, for” relates to other part of this sentence???

Non-natives would have difficulty to understand.

1.12.4. Inspections

- (1) The HSO shall be responsible for ensuring:
 - (a) That all working areas ~~of the Site~~ are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;
 - (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and
 - (c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*].
- (2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.

コメントの追加 [伊藤26]: The working areas are not always a part of the Site

1.13 HSO - Scope of Duties and Authority

NK: JICA added "and Authorities" in the last comment.

Now changed as above

1.13.1. The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.13.2. The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Work:
 - (a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;
 - (d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;
 - (e) Temporarily stopping the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.11 [*Safety Compliance Instructions from the Engineer*];
 - (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
 - (g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;
 - (h) Appointment of further supporting personnel (refer to 1.12.3 [*Supporting Staff*]);
 - (i) Instructing and training **Operation Leaders** in the health and safety aspects of their work including requirements for inspection and **confirmation** of results to HSO;

NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above:

- (i) Instructing and training the person in charge of construction works and the Contractor's Equipment in the health and safety aspects of their work including requirements for inspection and reporting of results to HSO;

I disagree and do not feel that any change is necessary. The position and authority of the HSO for the health safety on the Works should not be compromised. Who he requires assistance from is really his choice and it is dependent upon many factors such as the contractor's organisation, who is available, the general experience, capability and skill level of workers. We or the Engineer should have no interest in who he delegates support to providing the HSO does his job properly.

NK: 貴機構のコメントを伝えましたが、MD氏はまだ上記の意見です。貴機構のご意見はいかがでしょうか？

- (j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;
- (k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;
- (l) Planning and implementation of various training and education implementation plans;
- (m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;
- (n) Preparing regular internal and external reports on health and safety activities; and
- (o) Hazard prediction activity.

1.14 Procedure for Resuming the Works

1.14.1. If the Engineer has issued an instruction under JSSS 1.11 [Safety Compliance Instructions from the Engineer] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [HSO - Scope of Duties and Authority] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.
- (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within ~~seven fourteen (147)~~ days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving ~~seven three (73)~~ days' notice in writing of the resumption date.

To be proactive, the Engineer may give consent at any stage within the above stated time scales.

- (5) The Contractor resumes the Works or part of the Works on the due date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.

コメントの追加 [岡本27]: 前述と同じ。OK。

コメントの追加 [岡本28]: 14 days are too long.

コメントの追加 [伊藤29]: 7 days are too long.

- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1. The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2. In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

NK: We think the 1.15 is same as Japanese draft, however, we feel it is not clear who take the following action.

Is there any good idea to express the H&S management shall be made by management personnel consisting of construction managers, Operation Leaders, HSO (for reference I added personnel in charge of the activities below.).

Please see above notes, I do not feel that the following is desirable or necessary.

For further understanding, the Contractor's Representative has similar in fact heavier responsibilities but we (nor FIDIC) consider defining which of his staff do what to support him, I do not recommend but we try to do it.

Overall Safety Management Activities:

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); ~~(by construction managers, Operation Leaders, HSO)~~
- (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and ~~(by construction managers, HSO)~~
- (c) Monitoring the implementation of the Safety Plan. ~~(by HSO)~~

Above is not recommended

- (1) **Daily** Safety Management of Contractor's Personnel:

NK: We would like to add "Daily" before Safety in (2) to distinguish from (1).

No problem added already

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; ~~(by construction managers, HSO)~~
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures; ~~(by construction managers, Operation Leaders)~~
- (c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as : ~~(by construction managers, Operation Leaders)~~
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
- (d) Instruction and management of safety education and training; ~~(by construction managers, HSO)~~
- (e) Instruction and management of all safety measures; and ~~(by construction managers, Operation Leaders, HSO)~~
- (f) Site Safety Inspections. ~~(by construction managers, Operation Leaders, HSO)~~

None of above is recommended.

NK: We withdraw the addition.

NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.

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No problem deleted already

1.16 Joint Site Safety Inspections

- 1.16.1. In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.
- 1.16.2. Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.16.3. Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.16.4. The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.
- 1.16.5. The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.17 Compliance Monitoring and Auditing

- 1.17.1. The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured. Such compliance shall be monitored efficiently and transparently at all times, for which purpose the Contractor shall:

NK: We propose to divide the above to two sentences because the above sentence is long and contains two subjects.

This is not quite correct but I have divided anyway

- (1) Create checklists for monitoring.
 - (2) Carry out regular and random inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents.
 - (4) Create storage and filing systems for the monitoring records.
 - (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer.
- 1.17.2. Safety inspections are intended to search for risks and hazards, which present a threat to safe working.
 - 1.17.3. The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:
 - (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
 - (2) Are the Safety Plan requirements being met?
 - (3) Is there documented proof of compliance?
 - (4) Is health and safety training effective?
 - (5) Is the Contractor's health and safety management system working effectively?
 - 1.17.4. The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.
 - 1.17.5. The audit team procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer.

~~1.17.5.1.17.6. Unless otherwise consented to by the Engineer, the~~ The audit shall be headed by a senior member of the Contractor's head office health and safety team.

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~~1.17.6-1.17.7.~~ If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.

~~1.17.7-1.17.8.~~ The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.

~~1.17.8-1.17.9.~~ The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.

~~1.17.9-1.17.10.~~ The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems.

The Audits shall not replace the regular health and safety inspections.

NK: We think the above sentence is better to be divided two sentences.

This is not quite correct but I have divided anyway

~~1.17.10-1.17.11.~~ The audits shall be conducted on a random basis at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.

~~1.17.11-1.17.12.~~ The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor.

NK: JICA deleted in the last comment. We also consider the Engineer does not do auditing but inspection/supervise the Contractor's activities, and agree to delete this.

I do not really understand why it is deleted, as in any case the Engineer should be able to request/initiate an audit if he feels that the H and S system is not working properly.

NK: NK misunderstood this clause as the Engineer to do audit. We recommend now as follows;(time limit is given considering the preparation and trip time of the auditing team, and the safety management state cannot be improved in short time except such as cleaning the site, etc. If the Contractor takes actions for the auditing in short time, there is a merit for the Contractor to show example of required improvement.

The Engineer may at his option instruct the Contractor to execute a health and safety audit by giving proper preparation time for the auditing team between 3 days and 7 days.

NK: 機構のご意見はいかがでしょうか。

~~1.17.12-1.17.13.~~ Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.

NK: JICA commented "Such "not to do" should not be included in the specification." and deleted this sentence in the last comment. We agree to delete this because the auditing team cannot come to the site from Headquarters located in other countries by short notice, and the ISO auditing is made by around one month notice or as scheduled.

No comment, to be deleted

~~1.17.13-1.17.14.~~ An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.

~~1.17.14-1.17.15.~~ The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.18 Proper Placement of Contractor's Personnel

コメントの追加 [伊藤30]: エンジニアからの指示を受けて本社から3~7日で来い、というのは現実的とは思えません。

コメントの追加 [岡本31]: Safety auditをコントラクターの本社が行う、事前の Contractor's Personnelへの通知は行わない。これに賛成です。現場の所長は知っていて当然であるが、下請けや作業員は来ることを知らないベースです。

1.18.1. To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.

1.18.2. In compliance with GC 6.9 [*Contractor's Personnel*], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.

Change not correct

1.18.3. ~~Labourer~~Workers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.

1.18.4. The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.

~~1.18.5. The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.~~

~~1.18.6.~~1.18.5. The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.

~~1.18.7.~~1.18.6. Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:

- (1) Work content and work environment.
- (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability.
- (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
- (4) Allocation of an achievable and safe work volume and time.
- (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].

~~1.18.8.~~1.18.7. If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.

~~1.18.9.~~1.18.8. The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.

~~1.18.10.~~1.18.9. The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work

コメントの追加 [岡本32]: Duplication with 1.18.2. Also, difficult to have a concrete image on what kind of records???

immediately, contact the HSO immediately and instruct that **the HSO** resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.

NK: We think it is better to replace "he" with "the HSO" though he/she is nowadays used.

It is not necessary, please refer to JSSS 1.2.2 (8) and GC 1.2.(a). I have used "He" and "his" for example consistently and if it changes here it will require further change

1.19 Safety Training Generally

1.19.1. The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.

1.19.2. The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.

1.19.3. Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.

~~1.19.3.~~1.19.4. Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate).

1.20 Safety Induction Training

1.20.1. Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom **he the HSO** is responsible, including the Employer's Personnel and all other persons who are entitled to be on **the Site at** the request of the Employer or Engineer.

Ditto above

1.20.2. The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.

~~(5)~~ Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. **Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (Refer to separate requirements for special training).**

NK: May we know where we can find to refer to special training?

Rephrased

- (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.
- (7) Maintaining all working areas in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.
- (9) Firefighting; actions, precautions and control.
- (10) Health and safety rules.

コメントの追加 [J33]: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.

- (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

1.20.3. Practical on-Site demonstrations shall be included.

1.20.4. Training Personnel

- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
- (2) All trainers shall be fluent in the language of the persons to be trained.
- (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.

1.20.5. Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.21 Skill Training

1.21.1. The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. ~~The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.~~

1.21.2. ~~The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if ~~The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available in the Country or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects., the Contractor shall:~~~~

- ~~(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or~~
- ~~(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.~~

~~Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.~~

コメントの追加 [伊藤34]: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).

コメントの追加 [岡本35]: Not needed to say so in the specification.

コメントの追加 [岡本36]: 後述の 1.21.13 や 1.21.14 も合わせ読むと、恐らく MD 氏の理解は「途上国に必要なスキルを持った人間はいない。従って外国から連れてこなければならない。連れてきた外人は原則使い続けなければならない」この理解を前提にスペックを書くのは不適切。(伊藤)

コメントの追加 [伊藤37]: May be the case in many project, but skilled staff may be sometimes locally mobilized.

This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion and Defect Notification Period.

Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply:

- (1) To compliment this OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to provide basic skill training to develop the ability of local counterpart trainee operation leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots.
- (2) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

Consent is better which is why I have used it. There will be a great tendency for the Contractor not to comply with these requirements properly and it needs to be enforceable somehow, otherwise safety (and quality and performance) will suffer.

"For information" really has no meaning.

If only "for information", Contractor can proceed even if the course syllabus and hours are clearly inadequate and would not otherwise be acceptable.

The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

Details Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.

NK: This request is specified in Annex 1.2 (24/26) as Outline shall be submitted in Bid Stage SP.

This has been repeatedly discussed and explained.

If safety is to improve, this must happen from Bid stage onwards.

Every part of the Bid SP is Outline but some information is necessary on each subject listed in the Annex and should be submitted at Bid stage. If it is inadequate, only then can it be clarified and negotiated before the Contract is signed. After signing, is often too late.

NK: We agree to MD's opinion. However, the above sentence needs to be modified to such as "Updated details of such training mentioned in the Bid Stage Safety Plan shall be submitted."

1.21.2. ~~Subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.~~

1.21.3. ~~When the Contractor is satisfied that candidates have been successfully trained and qualified, and that they are able to act fully in accordance with the requirements of the Contract and subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries.~~

NK: This sentence may be necessary to be reviewed.

Please review the above. Control is essential otherwise the working trainers will be demobilised too soon.

コメントの追加 [伊藤38]: The Contractor also has to work during DNP and need skilled staff.

コメントの追加 [伊藤39]: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences?

I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.

Please also note that this entire clause is my suggestion only, if JICA and/or NK do not want it, please advise and I will delete all such training as necessary.

NK: 機構のご意見はいかがでしょうか？

~~1.21.4. It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice based upon capability in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.~~

~~1.21.5-1.21.3.~~ Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer **for his consent**.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

See above notes, it really should be "consent"

~~1.21.6-1.21.4.~~ Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

1.22 Dangerous Work

1.22.1. Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.22.2. Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.22.3. The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [Permit System] that is to be worn conspicuously and be available for validation by the Engineer.

I have added the following because of apparent concerns over the meaning of JSSS 2.5.1.(3)

1.22.4. The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by **specialist** trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.

1.22.5. A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.

1.22.6. The Contractor shall ~~select~~, train and equip ~~a specialist rescue team or teams of selected workers at the Site for emergency rescue operation in accordance with JSSS 1.24.6 and 1.24.7. who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue.~~

1.22.7. ~~Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.~~

NK: Harness is basically used now and belts is not, so deletion of belt is made.

コメントの追加 [伊藤40]: specially

コメントの追加 [岡本41]: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.

コメントの追加 [伊藤42]: Move to 1.24

~~Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 2.~~

~~The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works.~~

~~1.22.9.1.22.9. The requirement for rescue teams and rescue equipment shall be as specified in the Particular Safety Specification.~~

~~1.22.9.1.22.8. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.~~

1.22.10.1.22.9. The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.

コメントの追加 [伊藤43]: ditto

1.22.11.1.22.10. Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.

1.22.12.1.22.11. For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [Prohibition of Entry – Dangerous Work].

1.22.13.1.22.12. Hazardous Substances.

- (1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists ~~Subcontractor(s)~~ that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.
- (2) ~~The Contractor shall obtain the Engineer's consent for such specialist Subcontractors and their submit detailed Safety Plans and Method Statements with respect to the removal and disposal of the Hazardous Substances shall also be submitted to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].~~

コメントの追加 [伊藤44]: not necessarily Subcontractors

コメントの追加 [伊藤45]: modified accordingly

1.23 Permit to Work System

1.23.1. The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.

~~1.23.2. The system shall be designed to control safety for Dangerous Work all types of high risk work likely to be encountered, including for example:~~

コメントの追加 [伊藤46]: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.

~~Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3 Example of Dangerous Work.~~

~~There is no need to change this or give any examples, please refer to the definition of Dangerous Work in Annex 1.1. If you insist, change to "for example" as in the following subclause.~~

普通の高所作業などはDWではないと全体で読めるのならばこれでよし。さもなくばそう読めるように書いてもらう。

- ~~(1) Work in elevated positions, for example, transmission towers ladders and scaffolding, roof or ceiling work.~~
- ~~(2) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.~~
- ~~(3) Diving Works.~~

~~NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.~~

I believe that this will vary according to the actual project scope and I recommend to leave as it is. It is better to be left to the discretion of the HSO

コメントの追加 [岡本47]: MD 氏に賛成

1.23.4.1.23.3. The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.

1.23.5.1.23.4. Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.

1.23.6.1.23.5. The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

1.24.1. ~~Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.~~

コメントの追加 [伊藤48]: Moved to 1.24.5.

NK-1: JICA commented to modify and add "as specified in the Specification" to 1.20.2 in Issue 6.

NK consider that "as specified in Particular Safety Specification" between "the Works," and "the Contractor" if we follow JICA's comment.

NK-2: JICA commented that they want to use "as specified in Particular Safety Specification" more than "unless otherwise specified in Particular Safety Specification" because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSSS)

Can you specify as JICA's request to use "as specified in PSSS"?

コメントの追加 [岡本49]: 基本は PSSS に記載すべきで、記載されない場合は Contractor 自身の Discretion になるものと思量。

1) I do not recommend any use or reliance on "as specified in PSSS". If something is then not so mentioned in PSSS, (even when it should be), this means that there is no requirement stated.

2) "Unless otherwise specified" followed by stated requirements is the preferred and better method as the stated requirements in JSSS are then a default and even if nothing further is stated in PSSS, there will always be these requirements to rely on. This is a "failsafe" in JSSS production.

3) More importantly, it must be understood that the availability of these facilities is a total Contractor responsibility under FIDIC (Clause 6.7), under which the Contractor must provide such facilities, whether specified further by the Employer or not and the PSSS must not compromise this.

4) The problem is that work in distant and remote places is a very common feature of JICA projects (such as hydro, water supply, power, irrigation etc.) and frequently proper health and safety facilities are just not made available by the Contractor at the Site at the expense of human life and safety. Often there are no local health authorities, or they are not equipped or not capable or they are too far away to be of any value. Very often contractors do not provide facilities to save money and health and safety suffers badly. This is fairly common practice and a common problem.

5) The changes are suggested as a means of improving this situation and they should therefore be viewed against this background.

NK-3: JICA want to clarify who "other persons who are entitled to be on the Site" are, and where "other places (if any) are.

コメントの追加 [岡本50]: 他のコントラクターやサイトに入らざるを得ない住民など全てコントラクターの責任とするのはしようがない。

"other persons who are entitled to be on the Site" is from FIDIC (Clause 4.8 and others) and for whom the Contractor has responsibility for care, protection and safety. This is all-embracing and extends beyond Contractor's Personnel and Employer's Personnel to allow anyone who has a legal entitlement to be there (e.g. other contractor's, residents, others who have a right of way through the site, families of site staff if formally living there and others). I have stated this so that the extent of contractor's compliance with JSSS is clear and so that it does not diverge from the contract. I do not recommend that it is changed.

"and any other places as may be specified in the Contract as forming part of the Site" comes from the definition of Site (GC 1.1.6.7) which I have already deleted throughout for clarity and for which will consider and may add an appropriate note in the User Guide.

NK: 貴機構のご意見はいかがでしょうか？

~~1.24.2.1.24.1.~~ The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.

~~1.24.3.1.24.2.~~ ~~Unless otherwise specified in the Particular Safety Specification, in~~ Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, ~~to or for the use of any accompanying family members of~~ the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site. ~~If so specified in the Particular Safety Specification, such medical services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.~~

NK: JICA want to clarify where "other places (if any) are."

~~Deleted see above~~

~~1.24.4.1.24.3.~~ The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.

~~1.24.5.1.24.4.~~ ~~Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example include~~The Contractor shall provide the following medical and first aid facilities:

- ~~(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.~~
- ~~(2) First aid training, appointment of first aiders and dissemination of information.~~
- ~~(3) Type of communication facilities and measures for emergency response.~~
- ~~(4) Medical staff to be assigned at the Site.~~
- ~~(5) Medical Facilities on the Site together with description of equipment and consumables.~~
- ~~(6) Temporary water and power supply to maintain use during mains supply failure.~~
- ~~(7) Transportation facilities. Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.~~
- ~~(8) Additional facilities specified in the Particular Safety Specification, if any.~~
- ~~(9) Medical staff to be assigned at the Site.~~
- ~~(10) Emergency medivac services where necessary.~~

NK: We feel that the provision of medivac services seems excessive unless health insurance can cover it.

I disagree if it means saving a life. Whether health insurance covers it or not is irrelevant. There will be situations where it is available and necessary to save life, so can JICA say that fatality is acceptable as the alternative was too expensive?

- ~~(4)(1) Medical Facilities on the Site together with description of equipment and consumables.~~
 - ~~(5)(1) Temporary water and power supply to maintain use during mains supply failure.~~
 - ~~(6)(1) Type of communication facilities and measures for emergency response.~~
 - ~~(7)(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.~~
- ~~1.24.6. First aid training, appointment of first aiders and dissemination of information.~~

~~1.24.5. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities~~

コメントの追加 [伊藤51]: "Free of charge for everyone" need not to be as default. I don't believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!

If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.

コメントの追加 [伊藤52]: See comment to 1.2.2 (6)

コメントの追加 [岡本53]: Where the Site is located in a large distance from a sufficiently equipped hospital.

2と4~7は残す(2は ambulance という言葉は使わず Transportation とする) は1と3は Particular に飛ばす

do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.

コメントの追加 [伊藤54]: See comment to 1.2.2 (6)

~~1.24.7.1.24.6. Where the Works include the following for example, (The Contractor shall train selected Contractor's Personnel to perform emergency rescue operations in a safe manner in the event of any accident. Workers so trained are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.~~

コメントの追加 [伊藤55]: Merged with 1.22.6

- (1) Work on or near existing electrical equipment, cables, wiring, services and systems.
- (2) Dangerous Work such as Confine Spaces, work at height.

NK: We consider describing example as above.

Please see above notes and Annex 1.1 Definitions. I do not agree that any such examples are necessary

~~(3) Diving Work.~~

コメントの追加 [伊藤56]: Diving work is also Dangerous Work

~~(4) Similar special circumstances.~~

1.24.7. Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.

コメントの追加 [伊藤57]: Move from 1.22

1.24.8. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.

This should be "may" since the nature of Works may vary?

コメントの追加 [伊藤58]: Move from 1.22

All rescue team members/Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].

Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].

NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.

Better to delete reference here "as recommended by OSHA" and include your clear requirements in JSSS 2.9 [PP and First Aid].

コメントの追加 [伊藤59]: Agree

1.25 Measures at the Time Accidents Occur

1.25.1. When an accident occurs, the HSO the Contractor shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:

NK: JICA added in the last comment.

NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6.

コメントの追加 [伊藤60]: Agree

I disagree completely and do not recommend this (or any such) change. As I have explained repeatedly, the HSO must have this authority in order to fulfil his safety control functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible.

NK: 貴機構のご意見はいかがでしょうか?

コメントの追加 [岡本61]: ここは Contractor でしょう。工事に対しての責任はコントラクターなので。

- (1) Safely locate and extract casualties.
- (2) Provide first aid treatment at the Site.
- (3) Implement Secondary accident prevention activities, including:
 - (a) Preserving the accident site, make safe and prevent anyone interfering or entering;

- (b) Discontinuing construction work related to or in the vicinity of the accident; and
- (c) Implementing any further measures instructed by the Engineer.

1.25.2. Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident.
- (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The Accident Report shall include details of ~~the HSO's~~ **the Contractor's** recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].

Please see above notes on this subject. This should remain as the HSO, I disagree and do not recommend this (or any such) change.

1.25.3. For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].

1.26 Emergency Response Plan

1.26.1. To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and ~~as far as reasonably possible~~ shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.

The Contractor shall ~~the~~ take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, ~~where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have and to reasonably avoided, or~~ overcome or lessened the effects to a reasonable extent.

NK-1: Can we delete one of two "reasonably possible" above?

Yes, delete as above

NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).

With the changes to your draft that have now been agreed, I have already modified JSS 2.7 and I thought that the above can now be deleted as shown, however your later comments against 1.26.5 are confusing me greatly and I am unsure. Can you please answer my request against 1.26.5 first and I can then modify the above if necessary.

1.26.2. The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

It is perfectly correct as it is however have split it.

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the **Site, whether** engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

コメントの追加 [伊藤62]: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.

コメントの追加 [伊藤63]: Thank you for being non-native friendly. FIDIC 1999 and MDB version have been supported worldwide because of its "understandability". Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

1.26.3. Where, due to the location of the Site, there is a risk of **flooding**, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage **and flooding arising from such flooding**, earthquake or volcanic activity.

NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.

Yes this can be changed as above

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site **and to any third parties and neighbours** and property not connected with the Works but potentially affected thereby.
- (2) Provision of temporary support to all sides and soffits of excavations or **portal of portal of tunnelling of sufficient strength, durability and suitability.**

コメントの追加 [伊藤64]: See 1.2.2 (6)

コメントの追加 [伊藤65]: Better to add

NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel.

My recommendation is still (as written) to leave it as it was and make this as wide a term as possible to increase the coverage. There is no acceptable definition of "portal" and this change just introduces argument on interpretation, why change?

NK: We accept to leave as it is

- (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.26.4. Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [Contractor's General Obligations] and JSSS 1.9 [Contractor's Method Statements].

1.26.5. Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

~~This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract.~~

NK: We consider that the Contractor may have difficulty to assume what activities can be made.

We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.

Which underlining? In 1.26.1?

Please see 1.26.6 for my assumption of your requirements.

Your draft has never been clear to me and I am still having difficulty to understand what your draft means and what are your intentions and requirements.

Please note:

- 1) **The Contractor can only plan for what he can reasonably foresee or anticipate and**
- 2) **It is necessary to state this so that no confusion is introduced with FIDIC GC 19.**

コメントの追加 [岡本66]: この部分は理解できない。削除して単純に 1.26.6 の記載につなげればよい。

Better to jump to 1.26.6 without this.

3) This only leaves simple search and contact activities which has little or no meaning.

JSSS cannot specify what other measures the Contractor is to take after a Force majeure event (which I guess your emergency plan is trying to cover) as these events and any counter measures cannot be predicted.

Please can you clarify exactly what you are requiring the Contractor to do in the event of an earthquake, hurricane, typhoon or volcanic activity, so I can finalise this clause and also JSSS 2.7.

NK: 1.26.5 はさらに検討すべきかと考えておりますが、とりあえずこのままで提出致します。貴機構のご意見がありましたらご教示願います。

1.26.6. The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels.

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

1.26.7. The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.26.8. Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

コメントの追加 [伊藤67]: See 1.2.2(6)

1.26.9. If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.26.10. The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.

1.26.11. For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].

1.27 Contractor's Safety Committee and Regular Safety Meetings

1.27.1. The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.27.2. Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of **labour union, if any Contractor's Personnel.**
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.27.3. The HSO shall be the chairman of the Safety Committee.

1.27.4. The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Hazards, safety and health problems identified by any members of the Safety Committee;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **occurred in the previous month and measures to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

Is this sort of comment really necessary? Yes it can be changed but this is only an abbreviated sample agenda.

- (d) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (e) Safety instructions received from the Engineer;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country;
- (h) Safety and health awards, media attention and the like; and

- (i) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
- (j) Other matters.

NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion.

Again, is this sort of comment really necessary? I have changed this

1.27.5. Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.28 Engineer's Regular Safety Meetings

1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **in the previous month** and measures **to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

Ditto above

Is the sequence here acceptable or shall it change as above?

- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Status of resolution of previous problems;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country; and
- (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.
- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.

(5) The Engineer shall issue a formal instruction for any variation requests.

1.29 Project Safety Committee

1.29.1. On larger Projects with multiple contract packages and contractors and **unless otherwise stated** in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.29.2. Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.29.3. The Chairman of the Safety Committee **shall** be the Employer.

1.29.4. The Employer **shall** hold regular Project Safety Committee meetings, **on a monthly basis** unless otherwise agreed.

*NK: JICA commented to delete this as holding meetings are **not monthly basis but optional**.*

*We propose "**periodically as requested by the Employer**" and ask you to reply to this comment as reply is not mentioned in the document with notes.*

Please clarify what you want to be deleted.

NK: Deletion is "on monthly basis".

1.29.5. The Employer **shall** prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

NK: JICA commented to replace "shall" with "may" in Clauses 1.29.3 to 1.29.5.

We want to ask you to reply to this comment as reply is not mentioned in the document with notes.

Please note that I have already edited the first paragraph to state "unless otherwise specified."

With this change I think that no other change is necessary.

NK: MD 氏の回答をご参照願います。

1.30 Health and Safety Coordination with Other Contractors

NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer.

We propose to move them to the User Guide.

I disagree, this affects the Contractor also and it is important that it is stated here so that there is common and very clear legal agreement between Employer and Contractor on who does what.

I think that this requires mention in both JSSS and the User Guide to avoid future dispute.

Please also note my understanding that the User Guide is not a part of the Contract and please let me know if you require differently.

NK: MD 氏の回答をご参照願います。

1.30.1. Refer to GC 2.3 [**Employer's Personnel**] and GC 4.6 [**Co-operation**] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) **the Employer's Personnel,**
- (2) **any other contractors employed by the Employer,**
- (3) **the personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.**

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [Safety Procedures] and GC 4.18 [Protection of the Environment].

The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.

When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.

1.30.2. The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.30.3. If any other contractors are employed by the Employer or if any legally constituted public authorities responsible to the Employer is working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: as and when considered necessary by Engineer.
- (2) Unless otherwise agreed, attendees shall include representatives of:
 - (a) The Employer;
 - (b) The Contractor;
 - (c) Other contractors employed by the Employer; and
 - (d) Personnel of any legally constituted public authorities.

NK: We considers it is easy to understand attendee by adding "who may be employed in the execution on or near the Site of any work not included in the Contract." to (d) though it mentioned in the first sentence.

I don't understand your comment, please advise what change you require. (本Q&Aは無視願います。)

- (3) Agenda should relate to coordination among different contractors including for example:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;
 - (c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence;

NK: Are the phrases in red to be added?

See previous note

- (d) Status of resolution of previous problems;

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- (e) Items to be coordinated with police, fire department and other related organisations;
- (f) Compliance and registration requirements under the Laws of the Country;
- (g) Safety and health awards, media attention and the like; and
- (h) Other matters.

1.30.4. Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the **Engineer's** monthly progress report.

1.31 Safety Statistics

1.31.1. The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.31.2. Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, ~~casualties~~, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff.
- (9) Number of Contractor's safety meetings and frequency.
- (10) Number of candidates given safety induction and other training.

NK: Are "candidates" replaced with "Contractor's Personnel"?

No, they are all candidates for training and can include others e.g. Employer's Personnel and others, etc.

- (11) Number of safety inspections,
- (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (13) Instructions issued for unsafe behaviour or unsafe site conditions.
- (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (15) Engineer's Instructions issued for work suspension.
- (16) HSO instructions issued for work stoppage.
- (17) Others.

1.31.3. All data shall be in a format and content given consent by the Engineer.

1.31.4. The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

コメントの追加 [岡本68]: Engineer's monthly progress report is normally not shared with the Contractor. Delete "Engineer's" to mean Contractor's progress report.

コメントの追加 [岡本69]: 現時点ではいいかも知れないが、1.31, 1.32, 1.33 を統合した方が良く思量。重複が多い・理解ができないなどの理由による。

1.31 と 1.33 は記録の話。1.32 はその報告の話。であるならば、
①32 と 33 の順序を入れ替える。
②そうした記録は保管して Engineer の Inspection が受けられるようにしておくことをそれぞれで記述
③Monthly Safety Report で統計とその他の記録のサマリーを報告。

とすればよいのではないかと？

コメントの追加 [伊藤70]: Statistics and Records are mixed.

1 to 3 and 5 relate to statistics, 4 and 6 to 16 relate to records.

It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32".

By doing this, things will be streamlined: "statistics → records → their reporting"

1.31.5. The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].

1.32 Safety Reports

1.32.1. The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.

NK Is it necessary to add "for"?

Yes, it can be

- (2) Contractor/HSO and Joint Site Safety Inspections.
- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [Progress Reports].

コメントの追加 [伊藤71]:Joint Site Safety Inspection Report ?

1.33 Health and Safety Records

1.33.1. The Contractor shall keep health and safety records for the following:

- (1) Accidents, fatalities, near-misses.
- (2) Inspection records and checklists.
- (3) Meetings for safety and health management.
- (4) Monitoring of safety and health management activities.
- (5) Health and safety education and training for the Contractor's Personnel.
- (6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
- (7) Work environment records and other records required by JSSS Chapter 2 [General Safety Measures] and other parts of JSSS.

1.33.2. All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.

1.33.3. A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].

1.34 Health and Safety Incentive Schemes

1.34.1. The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.

NK: May we know if the word of "legitimate" (conforming to the law or to rules) is necessary?(対応済み)

We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.

Deleted see above.

- 1.34.2. It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.
- 1.34.3. It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.
- 1.34.4. Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.
- 1.34.5. Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.
- 1.34.6. The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.
- 1.34.7. As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.
- 1.34.8. The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [Safety Reports].

1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE

- 1.35.1. Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

- 1.35.2. The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by **the HSO** ~~(or his delegated and technically qualified assistant)~~ at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed **by the HSO**, thereby certifying the items as being **safe for use**.

コメントの追加 [伊藤72]: Agree with MD

NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system.

We want to ask you to modify the 1.35.2 as the above.

As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 [Supporting Staff] where this is explained.

I do not recommend your suggested change.

If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as **not being safe for use**, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

1.35.3. The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.

If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.35.4. As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

- (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.
- (2) New or recent Contractor's Equipment and Temporary Works, not more than five (5) years old upon the date that it is mobilised to the Site, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.

Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment by an independent testing, inspection and certification agency to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.

NK: We considers in actual basis as follows:

Q1: Is Scaffoldings classified in (1) TW? If so, no need to discuss the inspection of Scaffoldings before shipment? Shall Scaffoldings be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?

Steel and system scaffolding etc. is considered as Contractor's Equipment but other types may be TW. This is also not covered by Chapter 4 of your draft.

I have defined this is 1.35.1 and as it is an important item for which there should be no future argument.

Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffoldings, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.

Yes, see it includes all of these and yes much will be constructed or assembled at the Site but some major components (e.g. steel sheet piling, anchors, support systems and other components and materials) may be imported in which case this applies. Please refer also to definition in 1.35.1.

Can we delete "and Temporary Works" in (2)?

I do not recommend it.

Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.

This is not my recollection although it was mentioned as examples and my explanation covered all types of Contractor's Equipment.

コメントの追加 [岡本73]: Engineerが inspection / testingを命じその Test resultを Engineerに提出。結果 failした場合に、Engineerが使用を Reject するとして若干の書き換えが必要。

コメントの追加 [岡本74]: Temporary Works is covered in (2)

コメントの追加 [伊藤75]: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant?

We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies own old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too.

If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.

If you don't want pre-inspection at origin that is of course your choice. How to ascertain that it is compliant if there is no pre-inspection? It is too late when it arrives on site. I have given my suggestion and repeatedly explained this.

If JICA do not what this to apply, please let me have your instructions on what shall be changed and how.

We propose to delete the 2nd sentence above.

I do not agree for above reason but respect your wish. Just delete it.

In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."

JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair or maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."

There is no reason why anything should be added here and do not suggest that this is added as it is unnecessary duplication.

Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old.

The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?

JICA are paying market bid rates for the best most productive and safest equipment, why should this be compromised? I have already given my explanations and recommendation, please let me have your instructions on what this shall be changed to or if it shall be deleted.

Many contractors will definitely not like this age imposition because it is regularly abused in the pursuit of profit.

※ 1.35.4 に関しましてお記のご事案に前編様のご意見をの趣をの趣、記します。

1.36 Health Matters

1.36.1. The Contractor is reminded of his obligations under GC 6.7 [*Health and Safety*] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.36.2. Healthcare services and facilities at the Site shall be made available free of charge, to or for the use of the Contractor's Personnel, the Employer's Personnel and all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such healthcare services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.

コメントの追加 [伊藤76]: Same comment as 1.24

1.36.1. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to

~~fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.~~

~~1.36.2-1.36.3.~~ Occupational health care shall be provided by the Contractor and shall include ~~for~~ **example:**

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) **Avoiding** Frequent or excessive manual handling of loads, stress and fatigue.
- (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability.

~~1.36.3-1.36.4.~~ The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including descriptions and where necessary details or quantities of:

- (1) Health care staff to be assigned at the Site.
- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational **H** healthcare proposal.
- (6) Temporary water and power supply to maintain use during mains supply failure.
- (7) Type of communication facilities and measures for **emergency response**.

NK: May we know example of emergency response?

Please let me know what facilities you require and I will edit.

NK: We will further consider it.

~~1.36.4. Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site.~~

1.36.5. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site **to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.**

~~1.36.5-1.36.6.~~ Report of Serious Illness

- (1) The Contractor shall inform the Engineer and submit details of any serious illness.

NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.?

コメントの追加 [伊藤77]: See 1.2.2 (6)

コメントの追加 [岡本78]:
1.24 と同じならびで 1.36 全体を書き直し「 (伊藤)

コメントの追加 [伊藤79]: Better to add ???

コメントの追加 [伊藤80]: Is this health care service?

コメントの追加 [伊藤81]: See 1.2.2 (6)

It is up to you. Under GCC 6.7 The Contractor is required to maintain records and make reports concerning health matters to the Engineer as the Engineer may reasonably require. This is a further suggestion to try to reduce the volume and contents of report to be prepared.

Please see (4) following, the above can be omitted if required.

- (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures.

NK: Is "HSO" replaced with Contractor as same as (2) above?

No, I do not recommend this. Please refer to the previous notes on this subject, the Contractor may send it but the Health and Safety Officer will prepare it.

- (4) The Engineer is to be consulted on the types of illness for which reports are to be informed.

1.37 Design and Management of Temporary Works

1.37.1. Unless otherwise specified in the Particular Safety Specification, the Contractor is required to comply with the management standard with respect to design, erection, use and dismantling of Temporary Works provided in Section 1 and Section 2 of BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.

Changed already.

1.37.2. An alternative standard is acceptable by reference to JSSS 1.4.6+4.7 [Specified Standards and Regulations] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works including Class A Falsework.

NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specified specially referring to the following BS5975?

Section 1: General 1 Scope "This guidance is also applicable to the design of what is termed class A falsework 1) in BS EN 12812:2004, the design of which is for example specifically excluded from BS EN 12812:2004.

Please also refer to BS 5975, Foreword, page VII, penultimate paragraph.

The European standard on falsework, BS EN 12812, exists in parallel with this British Standard. It specifies performance requirements for the design of falsework in accordance with one of three classes: A, B1 and B2. Limit state design methods are specified for design classes B1 and B2. It does not provide guidance for the structural design of Class A. It is recommended that Section 3 is used to provide guidance for Class A falsework.

It appears to follow that BS EN 12812 is not necessarily an acceptable alternative for example because Class A is excluded. I have assume therefore that it is necessary to state the need for Class A Falsework.

Please be aware that I have not reviewed or studied the BS in detail so please do not assume that I have. I do recommend that it is studied by JICA and NK to ascertain that it is applicable.

Previous clause 1.34.3 regarding alternatives is not now required as I have drafted and included JSSS 1.4.6+4.7 [Specified Standards and Regulations] to cover this generally.

Previous clause 1.34.6 has already been deleted.

There is no need for the suggested insertion into the following clause (previous Clause 1.34.7) as per Ito san's comment.

1.37.3. It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.

コメントの追加 [岡本82]: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.

コメントの追加 [伊藤83]: 削除する？

- 1.37.4. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.
- 1.37.5. The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.

~~1.37.6. Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [Health and Safety Officer at the Site (HSO)].~~

JC: JICA commented as follows:

Issue 6 1.34.8 Too much to require the Contractor name all the specialist staff at the Bid stage. It is also excessive to require consent of the Engineer for those specialist staff.

"Necessary qualification" can be combined with 1.34.12 or 1.34.13.

Issue 6 1.34.9 If comply with JSSS1.9, all the specialist staff shall be appointed before the commencement, and subject to the Engineer's consent.

NK: *From this comment, the 1.37.12 below is enough requirement. 1.37.6 above specifies to refer to 1.12, which 1.12 is for HSO, it seems difficult to apply for personnel of TW.*

As 1.3.12 specifies requirement and necessity of consent of the Engineer, we propose to delete 1.37.6.

I understand your comment and have no objection to the deletion of 1.37.6

- 1.37.7. Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [Contractor's Method Statements]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer ~~may has no obligation under the Contract to~~ review Temporary Works design, ~~however he may choose to do so~~ for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 or any other acceptable standard in accordance with JSSS 1.37.2. ~~The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [Engineer's Duties and Authority] Sub Subclause (e) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.~~

I have given further thought to the following clause which was originally considered as an exception. I am now of the opinion that offering such alternative to an Employer to state his requirements in the PSSS is not a good idea as it may result have a negative effect.

Most JICA funded projects are large projects and will have a Temporary Works content.

I suggest that the following alternative clause should be deleted to make these important requirements very clear.

If there is only a small and simple TW content, even if the BS 5975 is applied it will not cause any major harm or cost.

The sample specification provided some time back by JICA for the Hong Kong Project showed that all work shall comply with the BS.

NK: MD 氏は上記の理由で次の 1.37.8 の条項は不要であると考え削除を提案しています。ご検討をお願いします。

~~1.37.8. Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:~~

- ~~(1) Appointment of appropriately qualified and experienced staff.~~
- ~~(2) Preparation of adequate Temporary Works designs.~~
- ~~(3) Independent internal or external checking of the Temporary Works Design.~~
- ~~(4) Preparation of a Temporary Works register and records~~
- ~~(5) Pre erection inspection of all Temporary Works, including materials, components and equipment~~
- ~~(6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to:
 - ~~(a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO Contractor of a suitable sign showing it as complete and safe to use; and~~
 - ~~(b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO Contractor of a suitable sign showing that it is ready for dismantling.~~~~

NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause,

we consider HSO will be replaced with Contractor as JICA commented:

Should it be HSO? When BS5975 applies. TWC/TWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?

The above applies when BS 5975 doesn't therefore I suggest (subject to JICA and NK agreement) that this can be deleted.

However, yes, the Temporary Works staff are all involved to make sure that the Temporary Works are designed and executed correctly, however the HSO is ultimately responsible for ALL safety on the Works and nothing should avoid his overview. I recommend that this should remain as HSO, I believe that it is a correct requirement which in practice should not be more than a counter signature.

1.37.9. ~~In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.~~

NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?

I understand and agree with your comment. However, JSSS 1.18 gives rules for the proper placement of Contractor's Personnel and it probably better therefore to rephrase this as above.

The following clause can be deleted

~~1.37.10. For further information on Method Statements refer to JSSS 1.9 [Contractor's Method Statements].~~

1.37.11. For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].

コメントの追加 [伊藤84]: Understand.
But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

1.37.12. Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties, and shall obtain the consent of the Engineer.

NK: We think 1.3.12 is too long sentence to clearly understand requirement.

Yes I agree and have reworded this as above.

Q-1 Is consent by the Engineer given to specialist staff?

This part can be deleted.

Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?

We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.

I have reworded all, please refer to the above

1.38 User Training

NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

Recommend that it be included here as a default requirement.

NK: 貴機構のご意見はいかがでしょうか？

~~1.38.1. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.~~

~~1.38.2. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.~~

~~1.38.3. User Training shall vary according to the scope of the Works however it shall generally cover the following:~~

- ~~(1) Safe system and Plant use, operation and process control.~~
- ~~(2) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements~~
- ~~(3) Training in use of all hardware and software packages.~~
- ~~(4) Laboratory control (sampling and analysis) including operation of laboratory equipment.~~
- ~~(5) Recording and reporting.~~
- ~~(6) Emergency operation procedure.~~
- ~~(7) Maintenance management procedures.~~
- ~~(8) Inventory and store control systems.~~
- ~~(9) Particular safety procedures, including:~~
 - ~~(a) Safe working procedure;~~
 - ~~(b) Housekeeping of the facilities;~~

コメントの追加 [岡本85]: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.

~~(c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and~~

~~(d) Safety measures for the Works and all items of Plant.~~

~~1.38.4. Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.~~

~~1.38.5. The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.~~

~~1.38.6. Other requirements for User Training~~

~~(1) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.~~

~~(2) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.~~

~~(3) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.~~

~~(4) The Engineer may choose to send representatives to witness the training.~~

~~(5) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.~~

~~(6) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.~~

~~(7) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty six (56) days before any training commences.~~

~~(8) Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.~~

~~(9) The Contractor shall use visual media as much as possible throughout the training process.~~

~~(10) Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.~~

~~(11) The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.~~

~~(12) Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.~~

~~(13) The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.~~

~~(14) The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.~~

- ~~(15) Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.~~
- ~~(16) The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty six (56) days.~~
- ~~(17) Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week days.~~
- ~~(18) Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.~~
- ~~(19) The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.~~

1.391.38 Unexploded Ordnance (UXO)

NK: we considers JICA may not specify 1.39 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

MD's reply: The Employer should inform the Contractor of the likely existence of UXO and if possible remove. The Contractor shall report any UXO then found to the Employer/Engineer for further instruction. This needs to be included in JSSS and the User Guide so that both parties are aware of the other's obligations. I have edited this to make the Employer responsible and have and separated accordingly.

NK: We have no comments to 1.39. xd v

For your further information, please note that this is an Employer's Risk under GC 17.3 (d).

The problem is, that GC 17.3 places no obligation upon the Employer (who should be more aware than anyone of the possible risk) to advise of the existence, to survey and remove such UXO before bidding or after if then encountered.

This is the reason behind including this in JSSS.

This clause may need some slight modification when I again work on the User Guide.

NK: 貴機構のご意見はいかがでしょうか？

- 1.39.1. If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.
- 1.39.2. Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.
- 1.39.3. Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by

the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.

- 1.39.4. Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.
- 1.39.5. Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy of the further clearance certificate together with any further instructions from the Engineer.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:

- (1) **“Executing Agency”** means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer.
- (2) **“GC”** and **“PC”** followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) **“Health and Safety Officer”** or **“HSO”** means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [*Health and Safety*] as construed in accordance with JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].
- (4) **“JICA Standard Safety Specification”** or **“JSSS”** means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works.
- (5) **“Method Statement”** means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] and supplemented by JSSS 1.9 [*Contractor’s Method Statements*].
- (6) **“Operation Leader”** (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations and who can also be referred to within the OSHA definition as a “Competent Person”.
- (7) **“OSHA”** means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- (8) **“Particular Safety Specification”** means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project ~~as illustrated in Annex 1.4 [Figures and Illustrations].~~
- (9) **“Project Safety Specification”** means the document that contains Part 1 [JSSS] and Part 2 [*Particular Safety Specification*] ~~as illustrated in Annex 1.4 [Figures and Illustrations].~~
- (10) **“Project”** means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (11) **“Safety Plan”** means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the

entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor's General Obligations*] as supplemented by JSSS 1.7 [*Contractor's Safety Plans*].

- (12) “**Safety**” shall also mean “occupational health and safety” and “health and safety”.
- (13) “**User Guide**” means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.

NK: There is no “User Guide” specified in JSSS. Does it necessary to define it in JSSS?

I think as it will be published on line probably at the same time as JSSS, it does need definition and more importantly, it requires a clear statement in JSSS, that it is NOT a part of the Contract (see added clause JSSS 1.7-3-4.)

It is my understanding that the User Guide is for the reference of the Employer only and it is probably also a good idea therefore to describe it as “An Employer’s Guide” or something like that to make it very clear.

コメントの追加 [岡本86]: User’s Guide はあっても良い。

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

- (1) “**Accident Response**” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [*Accident Response Plan*].
- (2) “**Confined Spaces**” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Cofferdam**” means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.
- (4) “**Dangerous Goods**” means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (5) “**Dangerous Work**” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.
- (6) “**Diver**” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.

For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [*Diving Works*].

- (7) “**Earthwork Support**” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.
- (8) “**Elevated Access Structures**” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.

- (9) “**Emergency Response**” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.26 [*Emergency Response Plan*].
- (10) “**Falling Objects**” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.
- (11) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (12) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (13) “**Hazardous Substances**” means any substance, whether solid, liquid or gas, that may cause harm to health.
- (14) “**Hazardous Areas**” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as **Zone 0, Zone 1 or Zone 2, where:**
- (a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;
 - (b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and
 - (c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.

NK: May we know the source of Classification?

May we know if this Zones are specified in JSSS?

Classification of Zones is from the Technical Measures Document of HSE.

<https://www.hse.gov.uk/comah/sragtech/techmeasareaclas.htm>

OSHA also have a classification which is more complicated.

Please be aware that in the absence of information in your draft, this is my suggestion but in every case and I rely on JICA and NK to check and confirm this. If you do not want to use this, please advise me and I will delete.

NK: ありません、現時点ではJSSSでは規定していません。

- (15) “**Hoisting Operation**” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.
- For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [*Hoisting and Rigging*].
- (16) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.
- (17) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level.
- (18) “**Personal Fall Restraint System**” or “**PFRS**” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of

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workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.

- (19) **“Personal Protective Equipment”** or **“PPE”** means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.
- (20) **“Safety Belt”** means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.
- (21) **“Safety Harness”** means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.
- (22) **“Scaffold”** or **“Scaffolding”** means a temporary structure or structures that provide access on or from which persons work or to support Goods.
- (23) **“Skill Training”** means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (24) **“Spotter”** means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*].
Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.
- (25) **“Trade Effluent”** means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.
- (26) **“Unexploded Ordnance”** or **“UXO”** shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.
- (27) ~~“User Training” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.~~
- (28) **“Working Platform”** means a platform on or within a scaffold that is intended and designed to support persons or Goods.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

AED	Automatic External Defibrillator
BMGV	Biological Monitoring Guidance Values
CPR	Cardiopulmonary Resuscitation
ODA	Official Development Aid
OJT	On Job Training

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PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings
TWA	Time Weighted Average
WEL	Workplace Exposure Limits

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ACI	American Concrete Institute
ANSI	American National Standards Institute.
ASHTO	American Association of State of Highway Transportation Officials
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials.
BS	British Standard.
BS EN	British Standard European Norm.
HSE	UK Health and Safety Executive.
ISO	International Organisation for Standardisation.
ILO	International Labor Organization.
JIS	Japanese Industrial Standards.

A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.

Annex 1.2: Content of Bid Stage Safety Plan

~~A1.2.1 This Annex lists the required content for the Bid Stage Safety Plan which is to be provided in accordance with "Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works", published by the Japan International Cooperation Agency (JICA). The Safety plan is to be included in the Bidding Documents Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF-39.~~

~~NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?~~

~~I think both are useful as the contractor should also be aware of requirements.~~

~~It is very important that the Employer/Consultant are prevented from altering the detail of this Annex in their Bidding Documents in any way, as all items are required in the Bid Stage Plan, all are coordinated with JSSS, the same structure, terminology and numbering must be used.~~

~~I suggest that this will be reworded something like the following, which I will do when go back to work on the User Guide further:~~

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor's Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder's intentions, so that this can be understood and properly evaluated.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety

コメントの追加 [岡本87]: Specとして残しても良いのではと考えます。

コメントの追加 [伊藤88]: Please add "outline (or policy?) of risk assessment" as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11)
"Safety Plan" means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods,.....

management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Bidder's Safety Management System

Refer to JSSS 1.5 [*Contractor's Safety Management System*]

~~Confirm~~ ~~Describe how which scheme~~ the Bidder *institutes the Safety Management System* ~~is accredited under~~.

(6) Temporary Works

Refer to JSSS 1.37 [*Design and Management of Temporary Works*].

A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying **the outline of safety** measures to be applied to ensure compliance with the requirements.

NK: JICA added "outline" in the last comment.

OK I have amended

(7) Temporary Facilities on Site

The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)

NK: We consider that the above sentence is independent clause from (6) above and locate in some place.

I have edited as above

(8) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.

(9) Safety Plan **for** the Works

NK: May the title be Works?

I have edited as above

A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.

(10) Safety Plan for Dangerous Work.

Refer to JSSS 1.22 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [*Definitions and Abbreviations*] and GC 4.1 [*Contractor's General Obligations*].

(11) Permit to Work System

Refer to JSSS 1.23 [*Permit to Work System*]

A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.

(12) Safety Measures for Contractor's Equipment

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

コメントの追加 [岡本89]:
Modified in accordance with modification to JSSS1.5

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(13) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.34 [*Health and Safety Incentive Schemes*]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.

(14) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(16) Site Inspection Plan

A description of the methods for Site inspections by the HSO, types of inspection and frequency.

The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work

(17) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.

(18) Policy for Preventing Traffic Accidents

A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.

(19) Reporting Procedure for Unsafe Conditions and Behaviour

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A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(20) Accident Response Plan

Refer to JSSS 1.23.1 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.

~~It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.~~

NK: We consider that the above sentence is independent clause from (19) above and locate in some place.

Deletion is OK

(21) Health Care Plan

Refer to JSSS 1.36 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(22) Fire Response Plan

Refer to JSSS 2.8 [*Fire Prevention*]

Details of the fire prevention services to be provided at the Site.

The Fire Response Plan required by JSSS 2.8 [**Fire Prevention**].

(23) Emergency Response Plan

Refer to JSSS 1.26 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(24) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [*Contractor's Safety Management Activities*]).

(25) Safety Induction Training

Refer to JSSS 1.20 [*Safety Induction Training*]

An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(26) Skill Training

Refer to JSSS 1.21 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.

~~(27)~~ User Training

Refer to JSSS 1.38 [*User Training*]

~~An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.~~

~~(28)~~(27) Legal requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.

Annex to the

Annex 1.3: Additional Contractor Forms

Attached Forms:

Form JSSS/BSD - Bidder's Safety Declaration

Form JSSS/SAR - Sample Accident Report

[loc](#)

Form JSSS/BSO - Bidder's Safety Declaration

[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]

I, [insert name and position of authorised signatory], being duly authorised by [insert name of Bidder/members of joint venture ("JV")] (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSO, hereby declare our commitment to comply with the health and safety requirements of the Contract.

The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.

The Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder declares that he will mobilise for use upon the Works:

1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.

Please refer to my recommendations and notes in 1.35 and advise me of your requirements

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability.
3. Fully inform workers about hazards;
4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand.
5. Keep accurate records of work-related injuries and illnesses.
6. Perform tests in the workplace, such as air sampling as required by the *Project* Safety Specification.

コメントの追加 [伊藤90]: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standard?

7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.
9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract.
10. Post injury and illness information and data where workers can see them.
11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site*)

Or

Bidder's Head Office Health and Safety Manager*)

Name:

Date: _____

(*Delete as applicable)

Form JSSS/SAR – Sample Accident Report

[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality) (If casualty(ies) is(are) belonging to subcontractor.) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	
8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	

(above to be inserted before all reports)

FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location of accident occurrence:	
4) Brief background and apparent cause:	
5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
6) Physical damages to the Works, Site and any properties of the third parties	
7) Present medical status of casualty(ies):	
8) Present work status:	
9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
10) Accident Report Submission Date	

SUBSEQUENT REPORT INFORMATION (POST-INVESTIGATION):	
1) Cause(s) of the accident:	
2) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:	
3) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
4) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
5) Other Information:	

Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____	Contractor's Health and Safety Officer (HSO)
Receipt acknowledged by: (name): _____ (sign): _____ Report Receipt Date(s) _____ Time: _____	Engineer

(above to be inserted with detail and signatures at end of each report)

Annex 1.4: Figures and Illustrations

Attached Documents:

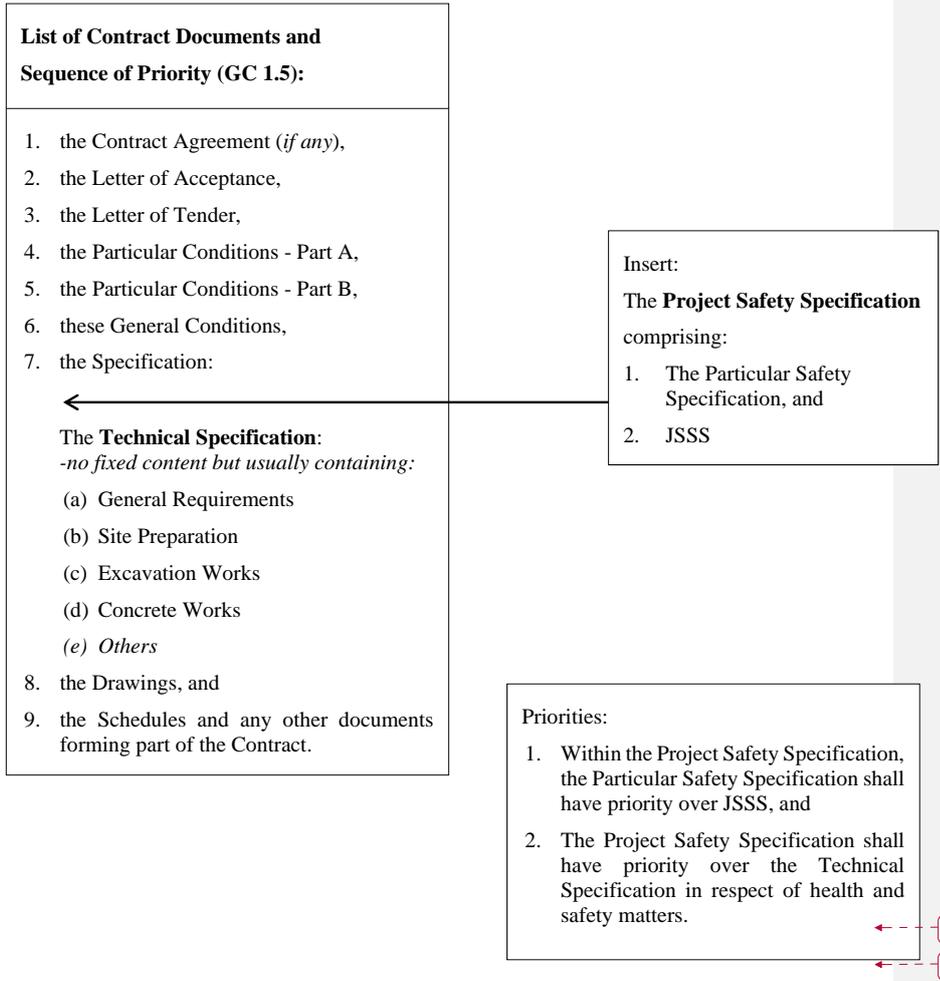
Fig A1.4.1 Incorporation of JSSS in Bid and Contract Documents

コメントの追加 [伊藤91]: Delete if nothing else other than Fig A 1.4.1

コメントの追加 [伊藤92]: Move to User Guide 1.3.2

Fig. A1.4.1

Incorporation of JSSS in Bid and Contract Documents



書式変更: 見出し 2, 間隔 段落前 : 0 pt, 段落後 : 0 pt

書式変更: 見出し 2

NK Comment to JICA Comments(20200506)

JICA Comment and Revision (20200423)

Yellow marking and red letters : Comments by NK (20200319) & (20200327)

Green – subsequent changes made by DCI, Replied to NK inquiry and added DCI notes (20200325)

200514 DCI Comment

DCI Notes:

We have provided comment where necessary or where requested by NK/JICA.

Our comment is not required by JICA on “blue” shaded items, therefore none is generally provided. This does not mean that we have no comment to make or that we recommend the changes are supportable or correct, which they are often not.

In some instances, we have prepared further notes for NK information so that NK are aware of the further reasons for our concerns.

We have also noticed that some original text may have been changed without any clear identification. Please note that we may not have not made comment on these items. We have also not reviewed the text word-for-word to identify all such changes.

Due to the complicated nature of this document, it is difficult for us to properly edit punctuation, numbering and cross references, which is better achieved on a clean copy. We have tried to do this but assume that we will recheck this again later.

Clause numbering has been reformatted throughout and page numbering adjusted.

We have not issued a clean copy as obviously the notes are important for now but when answers can be provided to the further notes and queries herein, we will be pleased to update and prepare a clean coordinated copy.

Due to clause numbering and heading changes, it will be necessary to update all other cross references in other Chapters where they relate to this Chapter 1, we do this when a clean copy of all is available.

NK Comment to JICA Comments(20200506)

JICA Comment and Revision (20200423)

Yellow marking and red letters : Comments by NK (20200319) & (20200327)

Green – subsequent changes made by DCI, Replied to NK inquiry and added DCI notes (20200325)

200514 DCI Comment

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE ODA



**Japan International Cooperation Agency
(JICA)**

_____, 2020

Prepared: DCI for NK
Issue: 8 (updated draft)
Revision:
Date: 15/05/2020

E16_200515 Chapter 1 General Iss 8 Updated Draft.docx

NK Comment to JICA Comments(20200506)

JICA Comment and Revision (20200423)

Yellow marking and red letters : Comments by NK (20200319) & (20200327)

Green – subsequent changes made by DCI, *Replied to NK inquiry and added DCI notes* (20200325)

200514 DCI Comment

Copy of Mail from Mr. Ito, JICA on 2020/4/23

Dear Sakoda-san,

Very sorry for this late reply with respect to Chapter 1 and User guide.

Regarding Chapter 1, we have sometimes modified directly the text, and sometimes put comments.

After several times of exchange between us, please be informed of the followings:

- 1) As for the modifications of text with a comment highlighted in light blue, you don't have to examine the contents any more. You are requested only to check the quality of language.
- 2) As for the modifications of text without any comment, same. You are requested only to check the quality of language.
- 3) The modifications of text with a comment highlighted in green are sometimes questions and sometimes requests for advice. So, would you please come up with an appropriate solution?

As for the User Guide, our comments are still preliminary since the draft was still preliminary one.

We have, nevertheless, worked in the same manner as mentioned above as long as practicable.

Thank you for your consideration,

I had suggested that copyright and disclaimer clauses would appear to be necessary for JSSS and had further requested that these suggestions be reviewed by JICA legal sources and that confirmation or comment with any revised text be obtained and provided. To date please note that this has not been received, the following remain therefore as good faith suggestions.

ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:

- 1) Japanese Acts, Orders and Ordinances including:
 - Industrial Safety and Health Act
 - Order for Enforcement of Industrial Safety and Health Act
 - Ordinance on Industrial Safety and Health
 - Safety Ordinance for Cranes
 - Ordinance on Safety and Health of Work under High Pressure
 - Ordinance on Prevention of Anoxia, etc.
 - Ordinance on Prevention of Hazards Due to Dust
 - Explosives Control Act
 - Order for Enforcement of Explosives Control Act
 - Ordinance on Explosives Control
- 2) OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- 3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.
- 4) ~~The International Red Cross and Red Crescent Movement (IRCRCM)~~
NK: In 2.9.2 First aid kit: ANSI Z308.1 is referred to. Is the above 4) necessary?
True: ANSI is the kit but first aid courses will also be necessary (see added clauses in Section 2.9 and Chapter 14 also. IRCRCM seems to be a convenient and internationally applicable basis.
The above is not necessary; this page is for copyright rules and as we have not copied or used their script, it can be deleted.
- 5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)

Previous Suggestion for JICA consideration:

COPYRIGHT

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JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

Draft
Requires further
coordination

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	2.2	Risk Control Around the Site
	2.3	Prohibition of Entry – Dangerous Work
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JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS)
CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

1.1 Safety Declaration

1.1.1 Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.

1.1.2 A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.

NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance1.3 and modify the 1.1.2 as follows:

1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Declaration.

This is specifically a Bid form to be submitted with the Bid and the wording is correct. Actually, this does require a change to the JICA Standard Bidding Document as included in our earlier draft but JICA do not want to do this.

We have modified the User Guide to state this but the same problem will arise, the User Guide requires the Executing Agency to change the Bidding Documents but the SBD prevent this.

If JICA do not change the SBD this will continue to be a problem and for now all else must therefore be an unsatisfactory compromise.

NK: NK inquired JICA whether it is not problem to include the form of Safety Declaration in the User Guide because the SBD does not allow addition.

NK5/6YH: JICA did not response to the above inquiry. We will proceed as MD proposed.

1.2 General Reference Notes

1.2.1 For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].

1.2.2 The following further general reference notes apply to the content of JSSS:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
- (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an **equivalent alternative** diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.

(6) *Unless otherwise stated in JSSS or the context is otherwise clear,* (JC1) *Any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor's Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer's Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.* (JC2)

NK: There are many descriptions of "other the Site areas (if any) where the Works are being executed" in JSSS. GC defines as 1.1.6.7 "Site" means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site. (NKのコメントにより、すでに削除済ですが、Q&Aは残しました。)

May we know the following?

Q1: Which places you are assuming as other places?

Q2: Are other places specified in the Particular Safety Specification?

Other places may be specified in the Contract as forming part of the Site such as offsite storage areas provided by the Employer or Employer's and Engineer's compounds and facilities all of which may be remote from the Site but for which the Contractor still has the usual obligations such as care, insurance, maintenance, etc.

This is obviously creating difficulty with interpretation, so I have deleted all such reference in JSSS and it now it constantly refers to the Site only. This will also be considered for mention in the User Guide

IC1: In this chapter 1, the expression "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site" which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better:

1. With this additional wording, simply say "the Contractor's Personnel" or

2. Without this additional wording, every time repeat "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works"

NK5/6YH: NK would like to select the 1 above for JSSS:

IC2: Safety measures are needed not only in the Site.

We would like to have advice of NK/MD. The current draft JSSS says:

A: the Site (very often) and

B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above.

Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:

"Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works."

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat "the Site and other places (if any) where the Contractor intends to execute the Works" every time. But this is too long, so a bit awkward.

How do you think?

NK5/6YH: NK would like to ask MD to review and select proper wording for JSSS:

This clause is intended only to ensure that the Employer's Personnel and any other persons who are entitled to be on the Site are automatically provided with the same health and safety measures that are provided to the Contractor's Personnel, whenever there is a mention of "Contractor's Personnel".

Thereafter there should be no other reference to "Employer's Personnel and any other persons who are entitled to be on the Site" unless it is for reasons other than the provision of health and safety requirements. I have reviewed other clauses and deleted some, where this is necessary.

For the purpose of this reference only it is not necessary to add any additional wording to "Site".

コメントの追加 [伊藤1]: In this chapter 1, the expression "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site" which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better:

1. With this additional wording, simply say "the Contractor's Personnel" or

2. Without this additional wording, every time repeat "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works"

コメントの追加 [岡本2]: Safety measures are needed not only in the Site.

We would like to have advice of NK/MD. The current draft JSSS says:

A: the Site (very often) and

B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above.

Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:

"Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works."

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat "the Site and other places (if any) where the Contractor intends to execute the Works" every time. But this is too long, so a bit awkward.

How do you think?

I suggest the clause can then be as now suggested by JICA or even left simply as it was.

- (1) Any reference in JSSS to “relevant authority” or “relevant authorities” shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.
- (2) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

~~1.3.1~~ JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The “Project Safety Specification” shall have priority over the other parts of the Specification in respect of health and safety matters. Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS, as illustrated in Annex 1.4: [Figures and Illustrations], Fig A1.4.1 [Incorporation of JSSS in Bid and Contract Documents] and as follows (JC3)

~~1.3.2~~ JSSS shall be included as a part of the Specification for the Works, which shall be subdivided into two parts namely:

~~1.3.3~~ The Project Safety Specification (including JSSS), and

~~1.3.4~~ The Technical Specification

1.3.5 The priorities of the document comprising the Specification are as follows:

~~1.3.6~~ Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS,

~~1.3.7~~ 1.3.1 The “Project Safety Specification” shall have priority ~~over the~~ Technical Specification in respect of health and safety matters.

NK: Q1: We think it needs to explain/define “Technical Specification” as same as User Guide 1.3.2 (3) The “Technical Specification” shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safety.

Yes I agree but the problem again is that “Specification” is already defined in the General Conditions of Contract and any change should be therefore be through a Particular Conditions change but JICA do not want this.

I have added the explanation as above but please note that this is a compromise.

Q2: Is “other parts of” necessary?

Thank you and no, if isn't, see above. (Already deleted.)

JC3: Better to avoid using “Technical specification”

Fig A1.4.1 moved to User Guide

NK5/6: No comment to JC because JICA want to modify as they commented.

I am informed that my comment is not required on “blue” shaded items, therefore none is provided

Suggested editing

~~1.3.8~~ 1.3.2 The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.

I recommend that the following is necessary (JC4)

コメントの追加 [岡本3]:

Better to avoid using “Technical specification”

Fig A1.4.1 moved to User Guide.

~~The User Guide shall not form a part of the Contract.~~

NK: MD proposed the addition above. NK considers it is not necessary.

JC4: Not necessary.

NK5/6: Deleted as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided.

Notes to NK: the statement that the User Guide does not form a part of the Contract is important and intended to limit risk for JICA.

The deletion is shaded in blue so I must not comment.

The biggest user of JSSS is actually the Contractor, and if it is published at the same time as the User Guide on the same JICA website the contractor will refer to it and this could create future problems.

Future claims from contractors can be predicted on this for example that the Bid documents have not been prepared properly according to the User Guide or that the full information (for example required by User Guide clause 1.3.3) has been not been provided or has been withheld. Whether such claims are insupportable under the contract or not, they must still be defended and this takes time and money usually which JICA pay.

JSSS 1.3.4 was intended to very simply prevent this but it has been deleted and I have been asked not to comment, so what can I do?

After further consideration on this subject and as advised in my last comment of Annex 1, I also suggest that it is better to rename the "User Guide", for example as the "Guide for Use of Executing Agencies", it is more correct and may reduce the risk of claim even though it will not solve this problem fully.

1.4 Compliance with JSSS and Other Regulations

1.4.1 JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.

1.4.2 JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

1.4.3 The Contractor shall comply fully with the requirements of JSSS Projectas ~~supplemented and modified by the Particular~~ Safety Specification.

1.4.4 ~~Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer's Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.~~(JC5)

JC5: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided.

1.4.5 ~~Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply.~~(JC6)

NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?

It is intended to be for the situation where JSSS has been agreed to be use, but it is lacking in some areas in which case we use the Laws.

JC6: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6.

NK5/6: Will delete as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided.

コメントの追加 [伊藤4]: Not necessary

コメントの追加 [岡本5]: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.

コメントの追加 [岡本6]: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6

1.4.6 If, for the particular parts of the Works, the Project Safety Specification does not contain safety requirements and there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable safety measures in the Safety Plans internationally acceptable safety regulations for the Engineer's consent. These may contain proposing application of internationally recognised standard or regulation.

NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?

It is intended for use where we have dropped back to the Laws but there are no particular Laws available.

I have no objection if both are deleted.

NK: NK propose to combine 1.4.5 and 1.4.6 below.

If there are no or insufficient safety provisions in the Laws of the Country and in JSSS and the Particular Safety Specification for the particular part of the Works, and if the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent. (subject to MD's review.)

There is no JICA comment to the above.

There is no JICA comment on this.

Your suggested combined clause is suitable, I have edited as follows:

If there are no or insufficient safety provisions in the Laws of the Country, in JSSS or in the Particular Safety Specification for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent.

1.4.7 Specified Standards and Regulations(JC7)

JC7: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.

NK5/6: YH think these regulations do not include the law. To MD, please review this comment and sentences.

For example, OSHA requirements to which you have referred in JSSS, are actually their regulations not standards.

These regulations are intended for the US and are enforceable only there under their rule of law.

Using OSHA does not mean or imply that you are adopting related US laws or rules for enforcement.

To avoid any legal association, please refer to subclause (4) below and also throughout the other "technical" chapters of JSSS where reference is made to OSHA by using the phrase to the "technical requirements of...."

This is very much a compromise but something like this is necessary to support your choice of OSHA as a reference basis.

My own opinion is that OSHA will not form a part of the applicable Laws or the Laws of the Country with which the Contractor is to comply under the Contract (see GC 1.13 and 13.7 respectively), however I recommend that JICA should check this opinion to support their choice of OSHA, HSE etc.

Please advise of any further requirements or if you require any change.

- (1) Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date.(JC8)

JC8: Better to add this in the main text of JSSS as mentioned in A1.1.5

NK5/6: YH think these regulations do not include the law. We would like to ask MD to review this.

There appears to be no problem with transferring the above clause to here but it needs deleting in the Annex to avoid duplication.

- (2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is

コメントの追加 [伊藤7]: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country...

コメントの追加 [J8]: Better to add this in the main text of JSSS as mentioned in A1.1.5 ?

acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.

~~(2)~~(3) *Application of detailed parts of any standards or regulations specified in JSSS may be waived at the formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request. (JC9)*

IC9: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of "waiver" should be provided.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided
Please refer to editing as shown in red

~~(3)~~(4) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.4.8 Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".

1.4.9 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:

- (1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.
- (2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear. (JC10)

IC10: We don't really understand the meaning of this.

NK5/6: YH considers this cannot be understood. To MD, please review this sentence..

Please clarify the meaning your query as I cannot clearly understand.

Similar to GC 1.5, the documents in JSSS are basically to be taken as mutually explanatory of one another however the priority of the documents should be stated, in order to resolve any future ambiguity or discrepancy. For this reason, I have suggested that for any interpretation difficulty;

between Chapter 1 (which is General) and all other chapters, then Chapter 1 will prevail and apply between Chapters 2 to 6 (which are also general) and all others (Chapters 7 to 10 and future), Chapters 2 to 6 will apply

Please advise of any change that you require.

1.4.10 Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion ~~and Defects Notification Period. ~~during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification. (JC11)~~~~

コメントの追加 [伊藤9]: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.

With this modification, Particular Safety Specification in User Guide will not be necessary any more.

NK: We consider that this phrase may be changed to “and the Defects Notification Period”? (Though the phrase is correctly expressed.)

No, your suggested change would not be correct this has been especially drafted following JICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).

The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer’s property except as stated in this clause.

NK: we agree to leave this as specified.

JC11: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.

With this modification, Particular Safety Specification in User Guide will not be necessary any more.

NK5/6: Will modify as commented.

I am informed that my comment is not required on “blue” items but am a little confused as NK are requested to redraft.

Notes for NK:

The following information is given for NK use.

I completely understood the JICA intentions during the earlier discussion in January which is why the above advice (highlighted in green) was given.

The Contractor must have already completed the Works before commencement of the DNP and they have already been taken over, occupied and put into use by the Employer.

The Contractor of course has a contractual obligation to take care of the health and safety of his employees when they are completing any work which is outstanding or executing any work required to remedy defects during the DNP and it is not necessary to state this in JSSS.

However, the Contractor has no obligation to continue to provide the majority of the facilities or services of JSSS during the DNP as the Works are completed, handed over, occupied and used by the Employer and most if not all temporary facilities will already have been removed.

To state that “the Contractor shall comply with the requirements of JSSS throughout the DNP” is not correct.

The Contractor for example has no obligation to provide ongoing services and facilities during the DNP, meaning no clinic, ambulance, medical facilities, fire-fighting, support to Employer and Engineer, spare PPE, training, scaffolding, contractor’s equipment and temporary works general availability etc etc, all of which are “requirements” of JSSS.

I am concerned that this will be misunderstood or even abused by some employers and consultants and that because this is so stated the contractor will be requested to provide services and facilities that he is no longer responsible for.

If any facilities are particularly required (e.g. clinic, ambulance, medical facilities, fire-fighting, spare PPE, training etc this should be clearly stated in the Particular Safety Specification so that the Contractor is aware and so that it can be included in his bid.

The added text is not therefore advisable.

1.4.11 The Contractor shall fully inform his personnel, his Subcontractor’s, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.

1.5 Contractor’s Safety Management System

1.5.1 The Contractor shall institute a health and safety management system in accordance with ~~OHSAS 18001 or ISO 45001:2018~~ (JC11a) ~~The Contractor shall submit original or certified~~

コメントの追加 [伊藤10]: OHSAS does not exist any more??
Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.

true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.

JC11a: OHSAS does not exist any more? Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.

NK5/6: OHSAS18001 will be expired on March 11, 2012. To MD, do we make note till the expiry date? NK agreed to delete the year.

1.5.2 ~~The Contractor shall state the applicable standard in the Contractor's Safety Plan.~~ (JC12)

JC12: If delete OHSAS above, delete accordingly.

NK5/6: To MD, please review this.

1.5.3 ~~The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.~~ Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17. (JC13)

JC13: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.

NK5/6: Will modify as commented.

1.5.4 The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.

NK: JICA deleted 1.5.3 in the last comment because JICA wants for the Contractor to institute and operate HS management system but not request submission of certification. (actually and practically certificate is not much important). We think 1.5.3 should be deleted.

I have deleted the requirement with the Bid (see Annex 1.3), however if the contractor is to comply with a scheme how does the Engineer know which scheme and how to verify compliance?

It has no little or no meaning otherwise.

NK: JICA intention is only to apply the safety management system excluding the certification and auditing by the certification body. Therefore, 1.5.3 is considered not request certification. To JICA, is this understanding correct?この考え方で正しいでしょうか?

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

NK, please can you advise me of the text that you want to insert here and I will edit this as necessary.

1.6 Checking and Validation of Submissions

1.6.1 In accordance with GC 4.9 [*Quality Assurance*] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination (JC13a), design and supervision staff and any independent checkers as appropriate.

NK: Is this correct that we think 1.6.1 is added in relation with design of TW, etc.?

Not only TW it also applies to his Safety Plans, Method statements, any shop or working drawings. In fact any Contractor submissions are stated.

JC13a: coordinator?

NK5/6: We think so.

1.6.2 ~~For the purposes of interpretation for JSSS, the final paragraph of GC 1.8 [*Care and Supply of Documents*] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible.~~ (JC14)

コメントの追加 [伊藤11]: If delete OHSAS above, delete accordingly

コメントの追加 [伊藤12]: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.

コメントの追加 [伊藤13]: coordinator?

NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.

This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. I believe that with the increased amount of submissions such as method statements, safety plans and temporary works details, there is an increased possibility that the Engineer could comment but chooses not to or even overlooks or misses, errors. If this happens there is the risk of avoiding responsibility if an error or defect (what is this?) should have been discovered. (JC14)

It is a strange but potentially onerous obligation that is inconsistent with GC 4.9 even if 1.8 does not state the consequences. GC 1.8 states: "If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect."

JC14: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1).

Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor.

We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".

NK5/6: Will modify as commented.

NK, please can you advise me of the text that you want to insert here and I will edit the spelling grammar of this as necessary.

1.7 Contractor's Safety Plans

1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.

1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:

- (1) that are stated in JSSS;
- (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and
- (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, ~~Employer's Personnel and other persons entitled to be on the Site.~~ (JC15)

JC15: See 1.2.2 (6).

NK5/6: No comment.

This is connected with the provision of health and safety measures as referred to in 1.2.2 (6) and can be deleted to be compatible.

1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:

- (1) Bid Stage Safety Plan (Outline Overall Safety Plan).
- (2) Commencement Stage Safety Plan (Updated ~~Overall~~ Bid Stage Safety Plan)
- (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works)

NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.

コメントの追加 [伊藤14]: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1). Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor. We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".

I don't quite understand your comment, the Bid Stage Plan is followed by an updated plan after Commencement but this is still an early plan and the same plan (or parts of it) will probably require to be further revised and updated as the detail of works develop and before any parts of the works commence.

NK: We understand your meaning.

1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level. ~~throughout the Time for Completion of the Works.~~

1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility. ~~and at any time throughout the Time for Completion of the Works.~~

NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?

Yes thank you, that is true, but better to delete the phrase rather than add.

1.7.6 Bid Stage Safety Plan:

- (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [*Content of Bid Stage Safety Plan*].
- (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

1.7.7 Commencement Stage Safety Plan

- (1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site,
- (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.
- (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.

NK: Is it not necessary to specify to review Commencement Stage SP?

Can we consider Commencement Stage SP is not be reviewed and the Engineer may review it and give comment in accordance with GC 1.8 Care and Supply of Documents though Japanese draft is specified to review it within 14 days?

My comment: I had modified the following clause 1.7.8 to deal with Particular Safety Plans. The Commencement Stage Safety plan is another contract stage submission subject to the same procedures so I have added it here.

Please also note the above correction to the submission date of the plan which should be twenty-eight (28) days after the Commencement Date.

1.7.8 Particular Safety Plans

- (1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.

1.7.9 Procedures for Submission and Review

- (1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works. (JC16).

JC16: Should it be "of the Works or any part thereof"?

NK5/6: We agreed the above modification.

Yes for consistency that is better but I suggest to further consistency please use:

"the Works or any part of the Works."

- (2) The Contractor shall submit:

(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].

(b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.

NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?

I have changed this.

Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP.

We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan

I disagree, many of the items mentioned in Issue 6 are to be included in the Method statement and all other items are included in Annex 1.3 all of which will be progressively developed. There is no need to include additional information here.

NK: understand.

- (3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:
- (c) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;
 - (d) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and
 - (e) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.

1.7.10 The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.

1.7.11 Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.

1.7.12 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.

コメントの追加 [岡本15]: Should it be "of the Works or any part thereof" ?

1.8 Risk Assessment

- 1.8.1 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.
- 1.8.2 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.

This is not directly connected with the provision of health and safety measures as referred to in 1.2.2 (6), it is safety warning, I suggest that the full expression should remain.

- 1.8.3 The procedural flow of risk assessment shall be as follows.
- (1) Identifying hazards.
 - (2) Evaluating risks.
 - (3) Determining measures of risk reduction or elimination.
- 1.8.4 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:
- (1) Removal of hazards such as eliminating dangerous methods of construction.
 - (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
 - (3) Engineering measures.
 - (4) Management measures including improving skills with additional training.
 - (5) Use of PPE.

NK: May we know what "improved PPE" mean?

Change

1.9 Contractor's Method Statements

- 1.9.1 The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.
- 1.9.2 Method Statements shall be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and (JC17) include details of all Permanent Works and Temporary Works with supporting documents such as:

JC17: Better to have a linkage with the risk assessment.

NK5/6: Will modify as commented.

(1) Studies, investigations and designs.

NK: We suggest to change to "Studies, investigations, and designs"?

Change

- (2) Structural calculations and any other calculations.
- (3) Specifications and technical details.
- (4) Proposed construction procedure, sequence and method.
- (5) Construction resources including superintendents, workers, operation leaders and Contractor's Equipment.

NK: We consider "worker" will be used because it is used in other Chapter though FIDIC uses "labour".

コメントの追加 [伊藤16]: Better to have a linkage with the risk assessment.

OK I have changed anyway but it now needs wider wording, labour is also used in FIDIC

(6) Inspection and monitoring plan.

1.9.3 The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.

1.9.4 Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.

Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:

- (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.
- (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.
- (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.
- (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.
- (5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.

NK: We consider "for his information" can be deleted because this phrase is not used for Safety Plan though Issue 6 used it.

change

1.10 Engineer's Safety Representative

1.10.1 ~~Unless otherwise specified in the Particular Safety Specification, the Engineer may delegate his power and authority to any of his assistant's delegated representative at the Site who (JC18) shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS.~~

IC18: Particular Safety Specification is not necessary with this modification.

NK5/6: Will modify as commented.

1.10.2 The terms of the appointment shall be in accordance with GC 3.2 [Delegation by the Engineer].

1.10.3 Whenever the term "Engineer" is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.

1.11 Safety Compliance Instructions from the Engineer

コメントの追加 [伊藤17]: Particular Safety Specification is not necessary with this modification.

- 1.11.1 Without affecting or diminishing the Contractor's responsibility under GC 4.1 [*Contractor's General Obligations*] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.
- 1.11.2 If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [*Suspension of Work*] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.

~~1.11.3 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer's consent and implemented such measures to ensure that no such accident can reoccur. (JC19)~~

IC19: The sentence is not complete???

NK5/6: To Md, please review the sentence.

Thank you, I suggest editing as follows:

1.11.4 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as:

- (1) the cause has been investigated and established by the Contractor;
- (2) corrective and preventive measures have been formulated by the Contractor and proposed to the Engineer;
- (3) the Engineer's consent has been obtained for such measures; and
- (4) the measures have been implemented to ensure that no such accident can reoccur.

1.11.5 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.12 Health and Safety Officer at the Site (HSO)

1.12.1 For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7 [*Health and Safety*], shall be construed as "Health and Safety Officer at the Site".

NK: HSO is defined in A1.1.1(3), so can 1.12.1 be deleted?

No. This is necessary to correspond to the definition.

Please note that this is a compromise. PC change would have been preferable.

1.12.2 Requirements for the HSO:

- (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.
- (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [*Contractor's Personnel*], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.

- (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety].
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) ~~Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management. (JC20)~~

~~Where there is no legal requirement under the Laws of the Country or unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as that International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK Level 6 Diploma level or Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) in USA or an equivalent alternative internationally recognised qualification covering health and safety and risk management.~~

No problem with the above, I suggest editing as follows:

Where there is no legal requirement under the Laws of the Country and unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as:

- (a) an International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK; or
- (b) Certification as a Certified Safety Professionals (CSP) by the Board of Certified Safety Professionals (BCSP) in USA; or
- (c) an equivalent alternative internationally recognised qualification covering health and safety and risk management.

JC20: To NK, Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia)

NK5/6: We rechecked the qualification of HSO required in the world and tabulated below:

No	Country	Law/Regulation	Title	Requirements	Work Experience
1	Japan	Ordinance on Industrial Safety and Health	Safety Officer	1. Trained personnel for 9 hrs training course, or	University or technical college science course other courses
					in S&H 2 years 4 years
					Senior high school science course other courses
					in S&H 4 years 6 years
					Others
					in S&H 7 years
				2. Industrial safety consultants.	

コメントの追加 [岡本18]: To NK: Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia)

2	USA	OSHA APPENDIX C TO §1926.65 COMPLIANCE GUIDELINES 1.Occupational S and H Program. U.S. Army Corps of Engineers, EM-385	e.g. Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) The Safety and Health Manager shall be the CSP.	CSP 1) Bachelor's degree, and 2) BCSP Qualified Credential (e.g. NEBOSH National or International Diploma in Occupational Health and Safety) 3) CSP examination	4 years of safety experience
3	UK	Internet Information	Environmental Health and safety manager	1) Bachelor's degree in Safety Engineering, etc. 2) National/International Diploma 1. NEBOSH National Diploma in Occupational Health and Safety. 2. British Safety Council Level 6 Diploma in Occupational Safety and Health., etc.	5 years related experience in environmental health and safety.
4	Singapore	Regulations	1)Representative of the Contractor 2)Safety Supervisor	1) Training and exam. of 3 days 2) Training of 10 hrs per week for 6 months (60 hrs)	
5	India	Regulation	1)Safety Officer 2)Safety Staff	1) Graduation of safety course more than 2 years in college 2) Training course	
6	Thailand	Regulation	1)Head Man Level 2)Technique Level 3)High Technique Level 4)Professional Level 5)Management Level	1) 12 hr training 2) Ditto 3) 180 hr training 4) Graduation of Occupational health bachelor course, or person trained & passed exam., or safety officer of 5 years experience and trained & passed exam. 5) 12 hr training	
7	Indonesia	Regulation	Occupational Health and safety Expert	10 days (90 hrs) training	
8	Vietnam	Regulation	Not found yet.		

NK: We found each country has its regulation regarding qualification of Safety Officer. Japanese one is almost same level as Head Man Level and Technique Level in Thailand.

In Japanese regulation, the Project Manger shall be a General Safety and Health Manager and supervise the Safety officer(s). Japanese contractors may not assign Japanese engineers directly as HSO though they have experience and knowledge of safety management in construction sites and also ability to manage safety in ODA projects. However, they have no academic certificates in Japan and also international training certificates. The Japanese contractors who work for ODA projects may employ safety specialist who having qualification required in the contract or make their engineers be certified by international organizations such as NEBOSH and BCSP. The contractor's engineers can get such certificates by on-line training course.

Japan, USA and UK give special importance to the S&H work experience, Singapore and Indonesia do to training of 60 to 90 hrs course, and Thailand do to any of bachelor, training or experience.

Actually, depending on scale and accident risk of construction project, the employer or contractor seem to determine requirements of HSO for example the following may be applied for large or complicated projects, NEBOSH International National Diploma (Level 6) in UK and CSP (Certified Safety Professionals) by BCSP in USA, for small projects, International General Certificate (A level) in UK and SMS (Safety Management Specialists) in USA.

NK: From the above, we propose to revise the (7) as above so that the qualification of HSO shall be 1) licensed or registered in the Country (legal requirement under the Laws of the Country), 2) specified in the Particular Safety Specification, and 3) International Diploma issued by NEBOSH in UK or Certified Safety Professionals by BCSP in USA or an equivalent alternative.

(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country, and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.

NK: We consider NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot find such person. Large contractors and European contractors may find them.

We propose to add (7) “unless otherwise specified in Particular Safety Specification” before “the HSO...”

have split this clause for clarity

suggest that NEBOSH is OK as it is because an equivalent alternative is acceptable (see use of this term in JSSS 1.4.7)

It is also subject to receiving the consent of the Engineer.

NK: We think “two (2) years experience outside the Country” is also too high requirement for the local contractors and also Japanese.

We propose to delete “this two years outside the Country” and specify requirement in Particular Safety Specification depending on the Works.

suggest that it is better to state here as a basic standard. If JSSS cannot specify a general standard, the choice of Executing Agencies will vary greatly. I will draft a relevant clause for the User Guide but please note that I have reduced the experience requirements and deleted the international requirements.

NK, please refer to editing above.

1.12.3 Supporting Personnel

Heading is changed to be consistent with the content

NK-1: JICA commented and minutes recorded in January as follows:

7.1.1 (5) HSO’s duties:

JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.

to this is not a correct understanding, the HSO duties and obligations are far wider which is why this clause is correct and necessary

Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?

Yes, he will be very busy which is why he must be qualified and experience and given the full support staff that he requires and why he must receive the support of other Contractor's Personnel particularly Operation Leaders, all as stated herein

MM: HSO should always be ultimately responsible as the leader really of the Contractor’s safety team with support duties delegated as necessary to a number of personnel including Operation Leaders. This is described in Chapter 1.10.1 and has been discussed. No change is required.

NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:

3. Common requirements in JSSS

(4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の “The HSO shall inspect work area before starting work...”は、“The Contractor shall ...”へ変更する。

HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.

From this idea, the HSO in the sentence “The HSO shall inspect work area before starting work...” shall be replaced with “the Contractor”.

Please let me review the Excavation comments when I receive them, however this looks correct as he is responsible for inspecting the safety arrangements, even if another person does the inspection on his behalf. It needs no change but the work will not always be directly inspected by him, he can and will delegate but he is singularly responsible and will sign it off

NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).

We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor’s Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in

accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.

Based on the above idea, we want to revise some sentences below.

- (1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.
- (2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.

NK: We propose to delete (2) from the idea of mentioned above NK-3. The supporting personnel shall be full time assignment. The Contractor shall establish system of daily check by the site staff or designated personnel for check by the Contractor and reporting by the site manager to the HSO.

think that (2) is clear, correct and necessary. Please refer to the following clauses also. It can be full time assistants or other Contractor's Personnel also who shall check certain aspects and who shall also have other responsibilities given to them by the HSO.

- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) ~~The HSO shall be expected to develop internal procedures whereby all supporting personnel, (JC21) shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.~~

JC21: It is understood "internal procedures whereby all supporting personnel shall be aware of the requirement for immediately advising the HSO...."

But how "and the details of any inspection, for" relates to other part of this sentence???

Non-natives would have difficulty to understand.

NK5/6: YH think the sentence can be separated as follows though no so much difficult to understand the sentence.
(次のように分解できるのだと思います。それほど違和感はありませんが。)

- 1) the requirements for any inspection
- 2) the details of any inspection

To MD, we would like to review the sentence because of sentence seems too long.

I suggest the above is edited as follows:

- (6) The HSO shall prepare an internal procedure for the management of his supporting personnel, to ensure that:
 - (a) Supporting personnel are made aware of the requirements for any inspection and the details thereof.
 - (b) Supporting personnel immediately advise the HSO of any unsafe conditions with recommendations to prohibit the start or to stop or to change safety practices for the particular work
 - (c) Communications and submissions between HSO and supporting personnel are efficient, timely and clear.

Following implementation and compliance with the above procedure, the HSO shall sign all inspection records as if the inspection has been carried out by the HSO.

コメントの追加 [伊藤19]: It is understood "internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO...."

But how "and the details of any inspection, for" relates to other part of this sentence???

Non-natives would have difficulty to understand.

- (7) Where the Works **or any part of the Works** is to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified **supporting personnel** for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

1.12.4 Inspections

- (1) The HSO shall be responsible for ensuring:
- (a) That all working areas **of the Site (JC22)** are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;

コメントの追加 [伊藤20]: The working areas are not always a part of the Site

JC22: The working areas are not always a part of the Site

NK5/6: No comment to JC because JICA want to modify as they commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

- (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to all **affected persons** and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and

This is not directly connected with the provision of health and safety measures as referred to in 1.2.2 (6), however I suggest that in this case the wording is changed as above to make it non-specific and therefore of wider w=effect

- (c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE].

- (2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.

1.13 HSO - Scope of Duties and Authority

NK: JICA added "and Authorities" in the last comment.

Now changed as above

1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Work:
- (a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;
- (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
- (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;
- (d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;

- (e) Temporarily stopping the Works or **any part** of the Works where the Engineer so instructs in accordance with JSSS 1.11 [*Safety Compliance Instructions from the Engineer*];
- (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
- (g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;
- (h) Appointment of further supporting personnel (refer to 1.12.3 [*Supporting Staff*]);
- (i) Instructing and training **Operation Leaders** in the health and safety aspects of their work including requirements for inspection and **confirmation** of results to HSO;

NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above:

- (i) Instructing and training the person in charge of construction works and the Contractor's Equipment in the health and safety aspects of their work including requirements for inspection and reporting of results to HSO;

disagree and do not feel that any change is necessary. The position and authority of the HSO for the health safety on the Works should not be compromised. Who he requires assistance from is really his choice and it is dependent upon many factors such as the contractor's organisation, who is available, the general experience, capability and skill level of workers. We or the Engineer should have no interest in who he delegates support to providing the HSO does his job properly.

- (j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;
- (k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;
- (l) Planning and implementation of various training and education implementation plans;
- (m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;
- (n) Preparing regular internal and external reports on health and safety activities; and
- (o) Hazard prediction activity.

1.14 Procedure for Resuming the Works

1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [**HSO - Scope of Duties and Authority**] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.
- (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.

- (4) If the Engineer gives no such notice of non-compliance for the original proposal within ~~seven fourteen (14)~~ (JC23) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving ~~seven-three (73)~~ (JC24) days' notice in writing of the resumption date.
- To be proactive, the Engineer may give consent at any stage within the above stated time scales.

コメントの追加 [岡本21]: 14 days are too long.

コメントの追加 [伊藤22]: 7 days are too long.

JC23& 24: 14 days are too long, and 7 days are too long.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

- (5) The Contractor resumes the Works or part of the Works on the due date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

NK: We think the 1.15 is same as Japanese draft, however, we feel it is not clear who take the following action.
Is there any good idea to express the H&S management shall be made by management personnel consisting of construction managers, Operation Leaders, HSO (for reference I added personnel in charge of the activities below.).

Please see above notes, I do not feel that the following is desirable or necessary.

For further understanding, the Contractor's Representative has similar in fact heavier responsibilities but we (nor FIDIC) consider defining which of his staff do what to support him, I do not recommend but we try to do it

Overall Safety Management Activities:

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); ~~(by construction managers, Operation Leaders, HSO)~~
- (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and ~~(by construction managers, HSO)~~
- (c) Monitoring the implementation of the Safety Plan. ~~(by HSO)~~

Above is not recommended

- (1) **Daily** Safety Management of Contractor's Personnel:

NK: We would like to add "Daily" before Safety in (2) to distinguish from (1).

No problem added already

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; ~~(by construction managers, HSO)~~
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place,

- scope, methods, safety PPE, timing and safety procedures; ~~(by construction managers, Operation Leaders)~~
- (e) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as ; ~~(by construction managers, Operation Leaders)~~
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
 - (f) Instruction and management of safety education and training; ~~(by construction managers, HSO)~~
 - (g) Instruction and management of all safety measures; and ~~(by construction managers, Operation Leaders, HSO)~~
 - (h) Site Safety Inspections. ~~(by construction managers, Operation Leaders, HSO)~~

None of above is recommended

NK: We withdraw the addition.

NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.

No problem deleted already

1.16 Joint Site Safety Inspections

- 1.16.1 In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.
- 1.16.2 Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.16.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.16.4 The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.
- 1.16.5 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.17 Compliance Monitoring and Auditing

- 1.17.1 The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured. Such compliance shall be monitored efficiently and transparently at all times, for which purpose the Contractor shall:

NK: We propose to divide the above to two sentences because the above sentence is long and contains two subjects.

this is not quite correct but I have divided anyway

- (1) Create checklists for monitoring.
 - (2) Carry out regular and random inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents.
 - (4) Create storage and filing systems for the monitoring records.
 - (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer.
- 1.17.2 Safety inspection are intended to search for risks and hazards, which present a threat to safe working.
 - 1.17.3 The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing

basically on the following five questions:

- (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
- (2) Are the Safety Plan requirements being met?
- (3) Is there documented proof of compliance?
- (4) Is health and safety training effective?
- (5) Is the Contractor's health and safety management system working effectively?

1.17.4 The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.

~~1.17.5~~ The audit ~~team~~ procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer.

~~1.17.5~~~~1.17.6~~ ~~Unless otherwise consented to by the Engineer, t~~The audit shall be headed by a senior member of the Contractor's head office health and safety team.

~~1.17.6~~~~1.17.7~~ If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.

~~1.17.7~~~~1.17.8~~ The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.

~~1.17.8~~~~1.17.9~~ The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.

~~1.17.9~~~~1.17.10~~ The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems.

The Audits shall not replace the regular health and safety inspections.

NK: We think the above sentence is better to be divided two sentences.

this is not quite correct but I have divided anyway

~~1.17.10~~~~1.17.11~~ The audits shall be conducted ~~on a random basis~~ at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.

~~1.17.11~~~~1.17.12~~ The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor. (JC25)

NK: JICA deleted in the last comment. We also consider the Engineer does not do auditing but inspection/supervise the Contractor's activities, and agree to delete this.

do not really understand why it is deleted, as in any case the Engineer should be able to request/initiate an audit if he feels that the H and S system is not working properly

NK: NK misunderstood this clause as the Engineer to do audit. We recommend now as follows:(time limit is given considering the preparation and trip time of the auditing team, and the safety management state cannot be improved in short time except such as cleaning the site, etc. If the Contractor takes actions for the auditing in short time, there is a merit for the Contractor to show example of required improvement.

The Engineer may at his option instruct the Contractor to execute a health and safety audit by giving proper preparation time for the auditing team between 3 days and 7 days.

JC25: It is not practical that the auditing team of the headquarters visit the Site within 3 to 7 days after the Engineer's instruction.

NK: 1.17.11(1.17.12) will be deleted.

~~1.17.12~~~~1.17.13~~ Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.

NK: JICA commented "Such "not to do" should not be included in the specification." and deleted this sentence in the last comment. We agree to delete this because the auditing team cannot come to the site from Headquarters located in other countries by short notice, and the ISO auditing is made by around one month notice or as scheduled.

~~This comment, to be delete.~~

~~1.17.13~~1.17.14 An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.

~~1.17.14~~1.17.15 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.18 Proper Placement of Contractor's Personnel

1.18.1 To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.

1.18.2 In compliance with GC 6.9 [*Contractor's Personnel*], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.

~~change not correct~~

1.18.3 ~~Labourer~~Workers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.

1.18.4 The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.

1.18.5 ~~The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement. (JC26)~~

JC26: Duplication with 1.18.2. Also, difficult to have a concrete image on what kind of records???

NK5/6: Will delete as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

1.18.6 The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.

The above will require editing as above in view of your change

1.18.7 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:

- (1) Work content and work environment.
- (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability.

コメントの追加 [岡本23]: Duplication with 1.18.2. Also, difficult to have a concrete image on what kind of records???

- (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
- (4) Allocation of an achievable and safe work volume and time.
- (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].

1.18.8 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.

1.18.9 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.

1.18.10 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that **the HSO** resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.

NK: We think it is better to replace "he" with "the HSO" though he/she is nowadays used.

is not necessary, please refer to JSSS 1.2.2 (8) and GC 1.2.1a). I have used "He" and "his" for example consistently and if it changes here it will require further change.

1.19 Safety Training Generally

1.19.1 The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.

1.19.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.

1.19.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.

1.19.31.19.4 Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate). (JC27)

JC27: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

1.20 Safety Induction Training

1.20.1 Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom **he-the HSO** is responsible, including the

コメントの追加 [J24]: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.

Employer's Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.

Ditto above

No problem

This is training and may not be directly connected with the provision of health and safety measures as referred to in 1.2.2 (6). I suggest for clarity that the full wording should remain.

1.20.2 The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.
- (5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (Refer to separate requirements for special training).

NK: May we know where we can find to refer to special training?

Rephrased

- (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.
- (7) Maintaining all working areas in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.
- (9) Firefighting; actions, precautions and control.
- (10) Health and safety rules.
- (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

1.20.3 Practical on-Site demonstrations shall be included.

1.20.4 Training Personnel (JC28)

JC28: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).

NK5/6: NK agreed to the above.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
- (2) All trainers shall be fluent in the language of the persons to be trained.
- (3) In case of absence of availability of suitable personnel in the Country, the Contractor

shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.

1.20.5 Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.21 Skill Training

1.21.1 The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. ~~The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.~~ (JC29)

JC29: Not needed to say so in the specification.

NK: Will delete as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

1.21.2 The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available in the Country or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects., the Contractor shall:

(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or

(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.

~~Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries. (JC30) all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.~~

JC30: May be the case in many projects, but skilled staff may be sometimes locally mobilized

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

Notes for NK

This is already reflected in FIDIC, 6.1 second paragraph. The suggested change actually changes the FIDIC contract requirements by introducing the wording: "to the extent practicable and reasonable". Such a change is not necessary and not recommended.

I had drafted this clause to strengthen the requirements for importing foreign resources, obviously where they are not available locally. The suggested added wording has no contractual meaning and will definitely weaken if not destroy any attempt by the Engineer (or Employer) to impose stronger requirements for importing foreign skilled

コメントの追加 [伊藤25]: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).

コメントの追加 [岡本26]: Not needed to say so in the specification.

コメントの追加 [伊藤27]: May be the case in many project, but skilled staff may be sometimes locally mobilized.

persons even though the Employer is already paying for it. I note the other deletions, which also tend to weaken requirements.

This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion *and Defect Notification Period.*(JC31)

JC31: The Contractor also has to work during DNP and need skilled staff.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

~~Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply.:(JC32)~~

JC32: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences?

I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.

NK5/6: To MD, please review the comment and modify the sentences.

Your comment requests that training be provided for other workers in addition to operation leaders.

Your original draft required training only for operation leaders and workers engaged in dangerous work.

Your draft documents contained requirements which were very unclear and which had little or actually no connection with the contract.

Dangerous work is covered by 1.20.2

Please refer to my comments on your original draft which I have explained since; I have advised that the Contractor already has a basic obligation to provide appropriately qualified, skilled and experienced personnel under the contract (see GC 6.1 and 6.9) and these contract requirements must not be compromised.

I had explained that it is illogical and contractually incorrect to require the Contractor to provide skilled personnel (where necessary importing skilled foreign personnel) under the Contract, expect the Employer to pay for this via the Contract Price, yet then assign non-compliant workers and other personnel and expect the Employer to pay for further skill training.

If this is required, the extent to which this is to be applied clearly needs to be carefully defined and controlled otherwise it can be argued that having complied with the training requirements he is not responsible for providing any additional capable and skilled persons unless the employer allows and pays for more skill training.

I am reluctant to add further skill training without knowing your precise additional requirements. Can you therefore please describe who shall receive skill training, to what level, with what resources, how to be managed and paid for and how this is to be made compatible with the Contract and I will edit your text as necessary and include this against earlier advice.

On the basis that skill training is only required to develop the skills of local operation leaders (which is still stretching the contract), I suggest editing this subclause as follows:

1.21.21.21.3 Further Training of Operation Leaders

- (1) Unless otherwise specified in the Particular Safety Specification and without limiting or changing the Contractor's obligations under the Contract, the Contractor shall be required to select candidates from his local skilled workforce that he considers are suitable to act as future Operation Leaders.
- (2) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their management abilities.

コメントの追加 [伊藤28]: The Contractor also has to work during DNP and need skilled staff.

コメントの追加 [伊藤29]: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences?

I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.

skill levels and awareness of international safety and quality standards.

- (3) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability skills and awareness and also to pass on their knowledge in future to their working colleagues and compatriots.
- (4) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

Consent is better which is why I have used it. There will be a great tendency for the Contractor not to comply with these requirements properly and it needs to be enforceable somehow, otherwise safety (and quality and performance) will suffer.

"For information" really has no meaning.

If only "for information", Contractor can proceed even if the course syllabus and hours are clearly inadequate and would not otherwise be acceptable.

- (5) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.
- (6) Details-Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.

NK: This request is specified in Annex 1.2 (24)(26) as Outline shall be submitted in Bid Stage SP.

This has been repeatedly discussed and explained.

If safety is to improve, this must happen from Bid stage onwards.

Every part of the Bid SP is Outline but some information is necessary on each subject listed in the Annex and should be submitted at Bid stage. If it is inadequate, only then can it be clarified and negotiated before the Contract is signed. After signing, is often too late.

NK: We agree to MD's opinion. However, the above sentence needs to be modified to such as "Updated details of such training mentioned in the Bid Stage Safety Plan shall be submitted."

~~Subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.~~

I cannot agree with or recommend the deletion of the clause regarding consent of the Engineer before demobilisation of foreign Operation Leaders, it is written for a purpose. It is sometimes difficult to get a contractor to assign any skilled foreign personnel on JICA projects in remote locations even when they are clearly necessary, for reasons of safety, quality and performance. Even when mobilised for example to comply with this clause, the contractor will have an incentive to demobilise such personnel as soon as he possibly can to optimise his profits rather than consider safety, etc.. I have recommended that some control is vital i.e. review and consent of the Engineer.

Other clauses that have now been deleted were also necessary to add to the flavour of this sensitive clause.

It now has little meaning or effect and basically a unscrupulous contractor will can now argue that the assignment of some foreign operation leaders and trainers for a short period complies with the requirements, his contract obligations are then all satisfied and having demobilised same persons, the employer is responsible for inadequacies beyond that point by not specifying more training.

1.21.3-

~~1.21.4 When the Contractor is satisfied that candidates have been successfully trained and qualified, and that they are able to act fully in accordance with the requirements of the Contract and subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries.~~

NK: This sentence may be necessary to be reviewed.

Please review the above. Control is essential otherwise the working trainers will be demobilised too soon.

Please also note that this entire clause is my suggestion only. If JICA and/or NK do not want it, please advise and I will delete all such training as necessary.

Please see above; the deletion of the other clause is not recommended. This training clause is an unusual requirement which is not compatible with the contract and it deserves full explanation as there is otherwise a risk that it will be misused in future.

It does not, then

~~(7) It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice based upon capability in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.~~

~~(8)~~(7) Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer **for his consent.**

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

See above notes, it really should be "consent"

~~1.21.5~~1.21.4 Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

1.22 Dangerous Work

1.22.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.22.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.22.3 The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [Permit System] that is to be worn conspicuously and be available for validation by the Engineer.

I have added the following because of apparent concerns over the meaning of JSSS 2.5.4.13:

1.22.4 The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by **specialist (JC33)** trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.

JC33: specially

NK5/6: To MD, Please check it.

Can also be "specially" if you prefer

コメントの追加 [伊藤30]: specially?

1.22.5 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.

1.22.6 ~~The Contractor shall select, train and equip a specialist rescue team or teams of selected workers at the Site for emergency rescue operation in accordance with JSSS 1.24.6 and 1.24.7. who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue. (JC34).~~

JC34: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6

NK5/6: Will modify as commented.

1.22.7 ~~Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC35)~~

NK: Harness is basically used now and belts is not, so deletion of belt is made.

Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 3.

The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works.

JC35: Move to 1.24

NK5/6: Will modify as commented.

~~The requirement for rescue teams and rescue equipment shall be as specified in the Particular Safety Specification.~~

1.22.91.22.8 ~~If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC36).~~

JC36: ditto

NK5/6: Will modify as commented.

1.22.101.22.9 ~~The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.~~

1.22.111.22.10 Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.

1.22.121.22.11 For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [Prohibition of Entry – Dangerous Work].

1.22.131.22.12 Hazardous Substances.

- (1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists ~~Subcontractor(s)~~ (JC37) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.

JC37: not necessarily Subcontractors

NK5/6: Will modify as commented.

No problem

- (2) ~~The Contractor shall obtain the Engineer's consent for such specialist Subcontractors~~

コメントの追加 [岡本31]: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.

コメントの追加 [伊藤32]: Move to 1.24

コメントの追加 [伊藤33]: ditto

コメントの追加 [伊藤34]: not necessarily Subcontractors

~~and their submit detailed Safety Plans and Method Statements with respect to the removal and disposal of the Hazardous Substances shall also be submitted (JC38) to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].~~

コメントの追加 [伊藤35]: modified accordingly

JC38: modified accordingly

NK5/6: Will modify as commented.

No problem

1.23 Permit to Work System

1.23.1 The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.

1.23.2 The system shall be designed to control safety for ~~Dangerous Work~~ all types of high risk work likely to be encountered, including for example: (JC39)

コメントの追加 [伊藤36]: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.

JC39: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.

NK5/6: Will modify as commented.

~~1.23.3 Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3 Example of Dangerous Work:~~

~~There is no need to change this or give any examples, please refer to the definition of Dangerous Work in Annex 1.1. If you insist, change to "for example" as in the following subclause.~~

~~(1) Work in elevated positions, for example, transmission towers ladders and scaffolding, roof or ceiling work.~~

~~(2) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.~~

~~(3) Diving Works.~~

NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.

~~I believe that this will vary according to the actual project scope and I recommend to leave as it is. It is better to be left to the discretion of the HSO.~~

1.23.4 The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.

1.23.5 Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.

1.23.6 The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

~~1.24.1 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.(JC40)~~

コメントの追加 [伊藤37]: Moved to 1.24.5.

JC40: Moved to 1.24.5.

NK5/6: Will modify as commented.

No comment

NK-1: JICA commented to modify and add “as specified in the Specification” to 1.20.2 in Issue 6.

NK consider that “as specified in Particular Safety Specification” between “the Works,” and “the Contractor” if we follow JICA’s comment.

NK-2: JICA commented that they want to use “as specified in Particular Safety Specification” more than “unless otherwise specified in Particular Safety Specification” because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSSS)

Can you specify as JICA’s request to use “as specified in PSSS”?

- 1) I do not recommend any use or reliance on “as specified in PSSS”. If something is then not so mentioned in PSSS, (even when it should be), this means that there is no requirement stated.
- 2) “Unless otherwise specified” followed by stated requirements is the preferred and better method as the stated requirements in JSSS are then a default and even if nothing further is stated in PSSS, there will always be these requirements to rely on. This is a “failsafe” in JSSS production.
- 3) More importantly, it must be understood that the availability of these facilities is a total Contractor responsibility under FIDIC (Clause 6.7), under which the Contractor must provide such facilities, whether specified further by the Employer or not and the PSSS must not compromise this.
- 4) The problem is that work in distant and remote places is a very common feature of JICA projects (such as hydro, water supply, power, irrigation etc.) and frequently proper health and safety facilities are just not made available by the Contractor at the Site at Site at the expense of human life and safety. Often there are no local health authorities, or they are not equipped or not capable or they are too far away to be of any value. Very often contractors do not provide facilities to save money and health and safety suffers badly. This is fairly common practice and a common problem.
- 5) The changes are suggested as a means of improving this situation and they should therefore be viewed against this background.

NK-3: JICA want to clarify who “other persons who are entitled to be on the Site” are, and where “other places (if any) are.

“other persons who are entitled to be on the Site” is from FIDIC (Clause 4.8 and others) and for whom the Contractor has responsibility for care, protection and safety. This is all-embracing and extends beyond Contractor’s Personnel and Employer’s Personnel to allow anyone who has a legal entitlement to be there (e.g. other contractor’s, residents, others who have a right of way through the site, families of site staff if formally living there and others). I have stated this so that the extent of contractor’s compliance with JSSS is clear and so that it does not diverge from the contract. I do not recommend that it is changed.

and any other places as may be specified in the Contract as forming part of the Site” comes from the definition of Site (GC 1.1.6.7) which I have already deleted throughout for clarity and for which will consider and may add an appropriate note in the User Guide.

1.24.2 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.

1.24.3 ~~Unless otherwise specified in the Particular Safety Specification, in (JC41) Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor’s Personnel, the Employer’s Personnel and the family members of all other persons who are entitled to be on the Site. (JC42) If so specified in the Particular Safety Specification, such medical services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.~~

NK: JICA want to clarify where “other places (if any) are.

Deleted see above

JC41: Free of charge for everyone” need not to be as default. I don’t believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!

コメントの追加 [伊藤38]: “Free of charge for everyone” need not to be as default. I don’t believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!

If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.

コメントの追加 [伊藤39]: See comment to 1.2.2 (6)

If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.

JC42: See comment to 1.2.2 (6).

NK5/6: Will modify as commented.

NK5/6: YH inquired if the sentence of "the family members of all other persons" is necessary to be deleted.

Yes, this applies only to remote sites as described originally in 1.24.1.

As 1.24.1 is moved then maybe this needs to be moved also or it needs editing, "such medical services" is not then correct

I had originally tried always to use the expression "Unless otherwise specified in the Particular Safety Specification" so what is written in JSSS is a safe default and the risk of error is therefore reduced. This has now been changed here and in 1.36 so reliance is now placed upon the PSS which I had tried to avoid.

1.24.4 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.

1.24.5 ~~Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example include~~The Contractor shall provide the following medical and first aid facilities:

- ~~(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.~~
- ~~(2) First aid training, appointment of first aiders and dissemination of information.~~
- ~~(3) Type of communication facilities and measures for emergency response.~~
- ~~(4) Medical staff to be assigned at the Site.~~
- ~~(4) Medical Facilities on the Site together with description of equipment and consumables.~~
- ~~(5) Temporary water and power supply to maintain use during mains supply failure.~~
- ~~(6) Transportation facilities. Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.~~
- ~~(2)(7) Additional facilities specified in the Particular Safety Specification, if any.~~
- ~~Medical staff to be assigned at the Site.~~
- ~~(3) Emergency medical services where necessary. (JC43)~~

NK: We feel that the provision of medivac services seems excessive unless health insurance can cover it.

Disagree if it means saving a life. Whether health insurance covers it or not is irrelevant. There will be situations where it is available and necessary to save life, so can JICA say that fatality is acceptable as the alternative was too expensive?

JC43: Where the Site is located in a large distance from a sufficiently equipped hospital.

NK5/6: Will modify as commented.

Your above added clause 1.24.5 is not correct contractually, is not necessary and I do not recommend that it is included, please refer to notes under 1.24.6 below.

- ~~(4)(1) Medical Facilities on the Site together with description of equipment and consumables.~~
- ~~(5)(1) Temporary water and power supply to maintain use during mains supply failure.~~
- ~~(6)(1) Type of communication facilities and measures for emergency response.~~
- ~~(7)(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.~~
- ~~1.24.6 First aid training, appointment of first aiders and dissemination of information.~~

~~1.24.7.1.24.6~~ Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.(JC44)

JC44: See comment to 1.2.2 (6)

NK5/6: Will modify as commented.

I do not recommend that your suggested changes are made.

Please refer to GC 6.7 [Health and safety] which in terms of Contractor's basic H and S obligations, should apply and prevail. This is why I had carefully worded this clause and stated "to comply with his obligations under the Contract".

By changing this to "as specified in the Particular Safety Specification" will change the basic requirements of the Contract and should not be done. Ignoring ambiguity and priorities, whatever is stated in the PSS (unless exactly the same as GC 6.7) will unnecessarily and incorrectly change the contract.

Similarly, it is not necessary to define or restrict the services and facilities to be provided as has been attempted in your added 1.24.5 above. I do not recommend that your clause is added meaning that the general requirements of GC 6.7 continue to apply.

The added clause 1.24.5 is not correct anyway as for example "ambulance service" which you have deleted is a requirement of the contract anyway.

To assist the Contractor with his Bid, I had suggested that the Employer/consultant may wish to assist the Contractor by stating actual site requirements in the PSS but not amending the basic requirements of the contract in the process.

On balance I do not see why any real change is necessary to this clause and what is suggested is confusing rather than improving.

~~1.24.8.1.24.7~~ Where the Works include the following for example, ~~†~~The Contractor shall train selected Contractor's Personnel to perform emergency rescue operations in a safe manner in the event of any accident. Workers so trained ~~†~~(JC45) are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.

JC45: Merged with 1.22.6

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

~~(1) — Work on or near existing electrical equipment, cables, wiring, services and systems.~~

~~(2) — Dangerous Work such as Confine Spaces, work at height.~~

NK: We consider describing example as above.

Please see above notes and Annex 1.1 Definitions. I do not agree that any such examples are necessary

~~(3)(1) Diving Work. (JC46)~~

JC46: Diving work is also Dangerous Work

NK5/6: We cannot understand how to this comment (JC46). To MD, please review this comment.

~~(4) — Similar special circumstances.~~

コメントの追加 [伊藤40]: See comment to 1.2.2 (6)

コメントの追加 [伊藤41]: Merged with 1.22.6

コメントの追加 [伊藤42]: Diving work is also Dangerous Work

1.24.9] 1.24.8 Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC47)

JC47: Move from 1.22.

This should be "may" since the nature of Works may vary.

NK5/6: To MD, please review this comment.

I am informed that my comment is not required on "blue" shaded items

It should be "shall", because where the nature of the Works so dictates, it "shall" be provided not "may" otherwise compliance appears optional, which is not the intention.

コメントの追加 [伊藤43]: Move from 1.22

This should be "may" since the nature of Works may vary?

1.24.9] 1.4.9 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC48)

JC48: Move from 1.22.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

コメントの追加 [伊藤44]: Move from 1.22

1.24.9] 1.4.10 All rescue team members Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].

1.24.9] 2.4.10 Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].

NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.

Better to delete reference here "as recommended by OSHA" and include your clear requirements in JSSS 2.9 [PP and First Aid]. (JC49)

JC49: Agree.

NK5/6: Will modify as agreed.

No comment

コメントの追加 [伊藤45]: Agree

1.25 Measures at the Time Accidents Occur

1.25.1 When an accident occurs, the HSO the Contractor shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:

NK: JICA added in the last comment.

NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6. (JC50)

I disagree completely and do not recommend this (or any such) change. As I have explained repeatedly, the HSO must have this authority in order to fulfil his safety control functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible.

JC50: Agree.

NK5/6: Will modify as agreed.

For the purposes of safety, the HSO must immediately take this action when he is aware of it and this should remain as his duty, not the contractor as you suggest. The interests are different and if immediate action by HSO is not taken, it should be the HSO that is held responsible.

コメントの追加 [伊藤46]: Agree

- (1) Safely locate and extract casualties.
- (2) Provide first aid treatment at the Site.
- (3) Implement Secondary accident prevention activities, including:

- (a) Preserving the accident site, make safe and prevent anyone interfering or entering;
- (b) Discontinuing construction work related to or in the vicinity of the accident; and
- (c) Implementing any further measures instructed by the Engineer.

1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident.
- (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The Accident Report shall include details of ~~the HSO's~~ the Contractor's recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].

Please see above notes on this subject. This should remain as the HSO. I disagree and do not recommend this (or any such) change.

1.25.3 For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].

1.26 Emergency Response Plan

1.26.1 To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and ~~as far as reasonably possible~~ shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.

The Contractor shall ~~the~~ take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, ~~where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have and to reasonably avoided, or overcome or lessened the effects to a reasonable extent. (JC51)~~

NK-1: Can we delete one of two "reasonably possible" above?

Yes, delete as above.

NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).

With the changes to your draft that have now been agreed, I have already modified JSS 2.7 and I thought that the above can now be deleted as shown, however your later comments against 1.26.3 are confusing me greatly and I am unsure. Can you please answer my request against 1.26.5 first and I can then modify the above if necessary.

JC51: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.

NK5/6: Will modify as commented.

I give no further comment.

1.26.2 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

It is perfectly correct as it is however have split it. (JC52)

JC52: Thank you for being non-native friendly.

コメントの追加 [伊藤47]: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.

コメントの追加 [伊藤48]: Thank you for being non-native friendly. FIDIC 1999 and MDB version have been supported worldwide because of its "understandability". Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

FIDIC 1999 and MDB version have been supported worldwide because of its "understandability". Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

NK5/6: No comment.

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.26.3 Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage and flooding arising from such flooding, earthquake or volcanic activity.

NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.

Yes, this can be changed as above.

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and (JC53) to any third parties and neighbours and property not connected with the Works but potentially affected thereby.

コメントの追加 [伊藤49]: See 1.2.2 (6)

JC53: See 1.2.2 (6).

NK5/6: Will modify as commented.

No comment

- (2) Provision of temporary support to all sides and soffits of excavations or portal of portal of (JC54) tunnelling of sufficient strength, durability and suitability.

コメントの追加 [伊藤50]: Better to add

NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel.

My recommendation is still (as written) to leave it as it was and make this as wide a term as possible to increase the coverage. There is no acceptable definition of "portal" and this change just introduces argument on interpretation, why change

NK: We accept to leave as it is

JC54: Better to add.

NK5/6: Will modify as commented.

No comment

- (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.26.4 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [Contractor's General Obligations] and JSSS 1.9 [Contractor's Method Statements].

1.26.5 Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

~~This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract.(JC55)~~

NK: We consider that the Contractor may have difficulty to assume what activities can be made.

We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.

Which underlining? In 1.26.6

Please see 1.26.6 for my assumption of your requirements.

Your draft has never been clear to me and I am still having difficulty to understand what your draft means and what are your intentions and requirements.

Please note:

1) The Contractor can only plan for what he can reasonably foresee or anticipate and

2) It is necessary to state this so that no confusion is introduced with FIDIC GC 19

3) This only leaves simple search and contact activities which has little or no meaning.

JSSS cannot specify what other measures the Contractor is to take after a Force majeure event (which I guess your emergency plan is trying to cover) as these events and any counter measures cannot be predicted.

Please can you clarify exactly what you are requiring the Contractor to do in the event of an earthquake, hurricane, typhoon or volcanic activity, so I can finalise this clause and also JSSS 2.7

JC55: Better to jump to 1.26.6 without this.

NK5/6: Will modify as commented.

No further comment

NK: Deleted as we cannot assume other requirements by the Employer.

1.26.6 The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels.

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

1.26.7 The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

コメントの追加 [岡本51]: Better to jump to 1.26.6 without this.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.26.8 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site. (JC56)

コメントの追加 [伊藤52]: See 1.2.2(6)

JC56: See 1.2.2(6).

NK5/6: To Md, please review this comment.

This is connected with the provision of health and safety measures as referred to in 1.2.2 (6) and can be deleted to be compatible.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.26.9 If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.26.10 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.

1.26.11 For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].

1.27 Contractor's Safety Committee and Regular Safety Meetings

1.27.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.27.2 Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of labour union, if any Contractor's Personnel.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.

(9) Any other necessary personnel.

1.27.3 The HSO shall be the chairman of the Safety Committee.

1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Hazards, safety and health problems identified by any members of the Safety Committee;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **occurred in the previous month and measures to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

Is this sort of comment really necessary? Yes it can be changed but this is only an abbreviated sample agenda.

- (d) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (e) Safety instructions received from the Engineer;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country;
- (h) Safety and health awards, media attention and the like; and
- (i) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
- (j) Other matters.

NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion.

Again, is this sort of comment really necessary? I have changed this

1.27.5 Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.28 Engineer's Regular Safety Meetings

1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;

- (c) Accidents, fatalities, injuries **in the previous month** and measures **to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

On the above

is the sequence here acceptable or shall it change as above?

- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Status of resolution of previous problems;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country; and
- (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.
- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.
- (5) The Engineer shall issue a formal instruction for any variation requests.

1.29 Project Safety Committee

1.29.1 On larger Projects with multiple contract packages and contractors and unless otherwise stated in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.29.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.29.3 The Chairman of the Safety Committee **shall** be the Employer.

1.29.4 The Employer **shall** hold regular Project Safety Committee meetings, **on a monthly basis** unless otherwise agreed.

NK: JICA commented to delete this as holding meetings are not monthly basis but optional.

We propose "periodically as requested by the Employer" and ask you to reply to this comment as reply is not mentioned in the document with notes.

Please clarify what you want to be deleted.

NK: Deletion is "on monthly basis".

1.29.5 The Employer **shall** prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

NK: JICA commented to replace “shall” with “may” in Clauses 1.29.3 to 1.29.5.

We want to ask you to reply to this comment as reply is not mentioned in the document with notes.

Please note that I have already edited the first paragraph to state “unless otherwise specified.”

With this change I think that no other change is necessary.

NK: MD 氏の回答をご参照願います。

1.30 Health and Safety Coordination with Other Contractors

NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer.

We propose to move them to the User Guide.

I disagree, this affects the Contractor also and it is important that it is stated here so that there is common and very clear legal agreement between Employer and Contractor on who does what.

I think that this requires mention in both JSSS and the User Guide to avoid future dispute.

Please also note my understanding that the User Guide is not a part of the Contract and please let me know if you require differently.

NK: MD 氏の回答をご参照願います。

1.30.1 Refer to GC 2.3 [*Employer’s Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer’s Personnel,
- (2) any other contractors employed by the Employer,
- (3) the personnel of any relevant authorities ~~legally constituted public authorities~~, who may be employed in the execution on or near the Site of any work not included in the Contract.

I have now given definition to “relevant authorities” and therefore suggest the above correction

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor’s efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] and GC 4.18 [*Protection of the Environment*].

The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor’s Safety Plan and that their personnel comply with the Contractor’s Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.

When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.

1.30.2 The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer’s Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.30.3 If any other contractors are employed by the Employer or if any relevant authorities ~~legally constituted public authorities~~ responsible to the Employer ~~are~~ ~~is~~ working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: as and when considered necessary by Engineer.
- (2) Unless otherwise agreed, attendees shall include representatives of:
 - (a) The Employer;
 - (b) The Contractor;
 - (c) Other contractors employed by the Employer; and
 - (d) Personnel of any relevant authorities legally constituted public authorities.

NK: We considers it is easy to understand attendee by adding "who may be employed in the execution on or near the Site of any work not included in the Contract." to (d) though it mentioned in the first sentence.

Don't understand your comment, please advise what changes you require. (本 Q&A は無視願います。)

I have now given definition to "relevant authorities" and therefore suggest the above correction

- (3) Agenda should relate to coordination among different contractors including for example:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any relevant authorities any legally constituted public authorities;

I have now given definition to "relevant authorities" and therefore suggest the above correction

- (c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence;

NK: Are the phrases in red to be added?

See previous note

- (d) Status of resolution of previous problems;
- (e) Items to be coordinated with police, fire department and other related organisations;
- (f) Compliance and registration requirements under the Laws of the Country;
- (g) Safety and health awards, media attention and the like; and
- (h) Other matters.

1.30.4 Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the ~~Engineer's~~ monthly progress report. (JC57)

JC57: Engineer's monthly progress report is normally not shared with the Contractor. Delete "Engineer's" to mean Contractor's progress report.

NK5/6: Will modify as commented..

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

1.31 Safety Statistics

コメントの追加 [岡本53]: Engineer's monthly progress report is normally not shared with the Contractor. Delete "Engineer's" to mean Contractor's progress report.

1.31.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.31.2 Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, ~~casualties~~, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff.
- (9) Number of Contractor's safety meetings and frequency.
- (10) Number of candidates given safety induction and other training.

NK: Are "candidates" replaced with "Contractor's Personnel"?

No, they are all candidates for training and can include others e.g. Employer's Personnel and others, etc.

- (11) Number of safety inspections,
- (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (13) Instructions issued for unsafe behaviour or unsafe site conditions.
- (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (15) Engineer's Instructions issued for work suspension.
- (16) HSO instructions issued for work stoppage. (JC58)
- (17) Others.

JC58: Statistics and Records are mixed.

1 to 3 and 5 relate to statistics.

4 and 6 to 16 relate to records.

It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32".

By doing this, things will be streamlined : "statistics → records → their reporting"

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

1.31.3 All data shall be in a format and content given consent by the Engineer.

1.31.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.31.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].

1.32 Safety Reports

コメントの追加 [伊藤54]: Statistics and Records are mixed.

1 to 3 and 5 relate to statistics.
4 and 6 to 16 relate to records.

It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32".

By doing this, things will be streamlined : "statistics → records → their reporting"

1.32.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions **taken, for improvement.**

NK Is it necessary to add “for”?

Yes, it can be

- (2) **Contractor/HSO and Joint Site Safety Inspections.**(JC59)

JC59:Joint Site Safety Inspection Report ?

NK5/6: Will modify as commented.

- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor’s monthly progress report, required by GC 4.21 [*Progress Reports*].

1.33 Health and Safety Records

1.33.1 The Contractor shall keep health and safety records for the following:

- (1) Accidents, fatalities, near-misses.
- (2) Inspection records and checklists.
- (3) Meetings for safety and health management.
- (4) Monitoring of safety and health management activities.
- (5) Health and safety education and training for the Contractor’s Personnel.
- (6) Health management for the Contractor’s Personnel, documents regarding workers’ health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
- (7) Work environment records and other records required by JSSS Chapter 2 [*General Safety Measures*] and other parts of JSSS.

1.33.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.

1.33.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor’s Monthly Safety Report to be submitted under JSSS 1.32 [*Safety Reports*].

1.34 Health and Safety Incentive Schemes

1.34.1 The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.

NK: May we know if the word of “legitimate” (conforming to the law or to rules) is necessary?(対応済み)

We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.

Deleted see above

1.34.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.

コメントの追加 [伊藤55]:Joint Site Safety Inspection Report ?

- 1.34.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.
- 1.34.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.
- 1.34.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.
- 1.34.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.
- 1.34.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.
- 1.34.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [Safety Reports].

1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE

- 1.35.1 Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

- 1.35.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO (or his delegated and technically qualified assistant) (JC60) at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.

コメントの追加 [伊藤56]: Agree with MD

NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system.

We want to ask you to modify the 1.35.2 as the above.

As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 (Supporting Staff) where this is explained.

do not recommend your suggested change.

JC60: Agree with MD

NK5/6: Will modify as commented.

No comment

If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

1.35.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.

If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.35.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

- (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works (JC61) of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.

JC61: Temporary Works is covered in (2)

NK5/6: Will modify as commented.

- (2) New or up to date recent Contractor's Equipment and Temporary Works, not more than five (5) years old upon the date that it is mobilised to the Site, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and

I suggest that "recent" is changed to "up to date" to be consistent with clause (1), to give it improved meaning (although still not definitive), particularly in view of the omission of the 5 year age limitation (which was definitive).

that all of the above will be used correctly and for the purpose intended.

Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment before delivering the Site (JC62) by an independent testing, inspection and certification agency to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.

This inspection was originally for the purpose of checking that the equipment was new or less than 5-years old.

However, as the age criteria has now been deleted, there is no reason why the Engineer should inspect the equipment and no criteria by which he can determine that the equipment is compliant or otherwise. This being the case, I recommend that this useful safeguard clause should now be deleted also.

Without clear age, criteria I do not recommend that any inspection would be time limited, could not include a full mechanical or operational check and ultimately will result in personal opinion. It may also be compromise later attempts to reject equipment at site when it is then found to be unsafe.

Had the age criteria still been maintained, agency inspection would be a very easy and possibly more efficient alternative.

NK: We considers in actual basis as follows:

Q1: Is Scaffoldings classified in (1) TW? If so, no need to discuss the inspection of Scaffoldings before shipment? Shall Scaffoldings be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?

Steel and system scaffolding etc. is considered as Contractor's Equipment but other types may be TW. This is also not covered by Chapter 4 of your draft.

have defined this as 1.35.1 and as it is an important item for which there should be no future argument.

コメントの追加 [岡本57]: Temporary Works is covered in (2)

コメントの追加 [伊藤58]: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant?

Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffolding, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.

Yes, see it includes all of these and yes much will be constructed or assembled at the Site but some major components (e.g. steel sheet piling, anchors, support systems and other components and materials) may be imported in which case this applies. Please refer also to definition in 1.35.1

Can we delete "and Temporary Works" in (2)?

I do not recommend it

Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.

This is not my recollection although it was mentioned as examples and my explanation covered all types of Contractor's Equipment

We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies own old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too.

If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.

If you don't want pre-inspection at origin that is of course your choice. How to ascertain that it is compliant if there is no pre-inspection? It is too late when it arrives on site. I have given my suggestion and repeatedly explained this.

If JICA do not want this to apply, please let me have your instructions on what shall be changed and how

We propose to delete the 2nd sentence above.

I do not agree for above reason but respect your wish. Just delete it

In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."

JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair or maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."

There is no reason why anything should be added here and do not suggest that this is added as it is unnecessary duplication

Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old.

The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?

JICA are paying market bid rates for the best most productive and safest equipment, why should this be compromised? I have already given my explanations and recommendation, please let me have your instructions on what this shall be changed to or if it shall be deleted

Many contractors will definitely not like this age imposition because it is regularly abused in the pursuit of profit
JC62: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant

NK5/6: Will modify as commented.

I note that aside from using the word "recent" which now has no real meaning (see above suggested change) the 5-year age limitation has been deleted here (and in the BDS).

This therefore effectively prevents the engineer from clearly and undisputedly rejecting aged and potentially unsafe or non-compliant equipment including equipment, which might be in good condition but is without modern safety features or which is inherently unsafe.

1.36 Health Matters

1.36.1 The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.36.2 Healthcare services and facilities at the Site shall be made available free of charge, to or for the use of the Contractor's Personnel, the Employer's Personnel and all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such healthcare services shall also be made available for free of charge for the family members of the aforementioned personnel/persons. (JC63)

JC63: Same comment as 1.24

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

コメントの追加 [伊藤59]: Same comment as 1.24

1.36.1.36.3 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC64)

JC64: See 1.2.2 (6).

NK5/6: Will modify as commented.

1.36.2.1.36.4 Occupational health care shall be provided by the Contractor and shall include ~~for example:~~

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) Avoiding (JC65) Frequent or excessive manual handling of loads, stress and fatigue.

JC65: Better to add ???

NK5/6: Will modify as commented.

- (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability. (JC66)

JC66: Is this health care service?

NK5/6: Will modify as commented.

1.36.3.1.36.5 The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including descriptions and where necessary details or quantities of:

- (1) Health care staff to be assigned at the Site.
- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational H-healthcare proposal.

コメントの追加 [伊藤60]: See 1.2.2 (6)

コメントの追加 [伊藤61]: Better to add ???

コメントの追加 [伊藤62]: Is this health care service?

- (6) Temporary water and power supply to maintain use during mains supply failure.
- (7) Type of communication facilities and measures for emergency response.

NK: May we know example of emergency response?

Please let me know what facilities you require and I will edit.

NK: We will further consider it.

~~1.36.4 Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site.~~

1.36.6 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC67)

JC67: See 1.2.2 (6).

NK5/6: Will modify as commented.

Please refer to my earlier comment under 1.24.6 and for the same reasons I do not recommend that this change be made.

~~1.36.5~~ 1.36.7 Report of Serious Illness

- (1) The Contractor shall inform the Engineer and submit details of any serious illness.

NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.?

It is up to you. Under GCC 6.7 The Contractor is required to maintain records and make reports concerning health matters to the Engineer as the Engineer may reasonably require. This is a further suggestion to try to reduce the volume and contents of report to be prepared.

Please see (4) following, the above can be omitted if required.

- (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures.

NK: Is "HSO" replaced with Contractor as same as (2) above?

No. I do not recommend this. Please refer to the previous notes on this subject, the Contractor may send it but the Health and Safety Officer will prepare it.

- (4) The Engineer is to be consulted on the types of illness for which reports are to be informed.

1.37 Design and Management of Temporary Works

1.37.1 Unless otherwise specified in the Particular Safety Specification, the Contractor is required to comply with the management standard with respect to design, erection, use and dismantling of Temporary Works provided in Section 1 and Section 2 of BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework. (JC68)

changed already

JC68: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.

NK5/6: Will modify as commented.

コメントの追加 [伊藤63]: See 1.2.2 (6)

コメントの追加 [岡本64]: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.

No comment

1.37.2 An alternative standard is acceptable by reference to JSSS 1.4.7 [*Specified Standards and Regulations*] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works including Class A Falsework (JC69).

NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specified specially referring to the following BS5975?

Section 1: General 1 Scope "This guidance is also applicable to the design of what is termed class A falsework 1) in BS EN 12812:2004, the design of which is for example specifically excluded from BS EN 12812:2004.

Please also refer to BS 5975, Foreword, page VII, penultimate paragraph.

The European standard on falsework, BS EN 12812, exists in parallel with this British Standard. It specifies performance requirements for the design of falsework in accordance with one of three classes: A, B1 and B2. Limit state design methods are specified for design classes B1 and B2. It does not provide guidance for the structural design of Class A. It is recommended that Section 3 is used to provide guidance for Class A falsework.

It appears to follow that BS EN 12812 is not necessarily an acceptable alternative for example because Class A is excluded. I have assumed therefore that it is necessary to state the need for Class A Falsework.

Please be aware that I have not reviewed or studied the BS in detail so please do not assume that I have. I do recommend that it is studied by JICA and NK to ascertain that it is applicable.

Previous clause 1.34.3 regarding alternatives is not now required as I have drafted and included JSSS 1.4.7 [*Specified Standards and Regulations*] to cover this generally.

Previous clause 1.34.6 has already been deleted.

There is no need for the suggested insertion into the following clause (previous Clause 1.34.7) as per the said comment.

JC69: delete it?

NK5/6: Will delete as commented because the sentence is for the management of Temporary Works, so Class A Falsework; one of TWs, is not needed to be specially mentioned.

No comment

1.37.3 It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.

1.37.4 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.

1.37.5 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.

~~1.37.6 Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].~~

JC: JICA commented as follows:

Issue 6 1.34.8 Too much to require the Contractor name all the specialist staff at the Bid stage. It is also excessive to require consent of the Engineer for those specialist staff.

"Necessary qualification" can be combined with 1.34.12 or 1.34.13.

Issue 6 1.34.9 If comply with JSSS1.9, all the specialist staff shall be appointed before the commencement, and subject to the Engineer's consent.

NK: From this comment, the 1.37.12 below is enough requirement. 1.37.6 above specifies to refer to 1.12, which 1.12 is for HSO, it seems difficult to apply for personnel of TW.

As 1.3.12 specifies requirement and necessity of consent of the Engineer, we propose to delete 1.37.6.

~~Understand your comment and have no objection to the deletion of 1.37.6.~~

1.37.7 Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [Contractor's Method Statements]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer ~~may have no obligation under the Contract to~~ review Temporary Works design, ~~however he may choose to do so~~ for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 or any other acceptable standard in accordance with JSSS 1.37.2. ~~The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [Engineer's Duties and Authority] Sub Subclause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.~~

I have given further thought to the following clause which was originally considered as an exception. I am now of the opinion that offering such alternative to an Employer to state his requirements in the PSSS is not a good idea as it may result have a negative effect.

Most JICA funded projects are large projects and will have a Temporary Works content.

I suggest that the following alternative clause should be deleted to make these important requirements very clear.

If there is only a small and simple TW content, even if the BS 5975 is applied it will not cause any major harm or cost.

The sample specification provided some time back by JICA for the Hong Kong Project showed that all work shall comply with the BS. (JC70).

NK: MD氏は上記の理由で次の1.37.8の条項は不要であると考え削除を提案しています。ご検討をお願いします。

JC70: Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

NK5/6: Will modify as commented.

Will look at this when I review the user guide

1.37.8 ~~Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:~~

- ~~(1) Appointment of appropriately qualified and experienced staff.~~
- ~~(2) Preparation of adequate Temporary Works designs.~~
- ~~(3) Independent internal or external checking of the Temporary Works Design.~~
- ~~(4) Preparation of a Temporary Works register and records~~
- ~~(5) Pre erection inspection of all Temporary Works, including materials, components and equipment.~~

コメントの追加 [伊藤65]: Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

- (6) ~~Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to:~~
- (a) ~~Check that the Temporary Works have been erected in accordance with the design and issue by the HSO Contractor of a suitable sign showing it as complete and safe to use; and~~
 - (b) ~~Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO Contractor of a suitable sign showing that it is ready for dismantling.~~

NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause,

we consider HSO will be replaced with Contractor as JICA commented:

Should it be HSO? When BS5975 applies. TWC/TWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?

~~The above applies when BS 5975 doesn't therefore, I suggest (subject to JICA and NK agreement) that this can be deleted.~~

~~However, yes, the Temporary Works staff are all involved to make sure that the Temporary Works are designed and executed correctly, however the HSO is ultimately responsible for ALL safety on the Works and nothing should avoid his overview. I recommend that this should remain as HSO. I believe that it is a correct requirement which in practice should not be more than a counter signature.~~

1.37.9 ~~In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.~~

NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?

~~I understand and agree with your comment. However, JSSS 1.18 gives rules for the proper placement of Contractor's Personnel and it probably better therefore to rephrase this as above.~~

~~The following clause can be deleted~~

~~1.37.10 For further information on Method Statements refer to JSSS 1.9 [Contractor's Method Statements].~~

1.37.11 For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].

1.37.12 Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties. ~~and shall obtain the consent of the Engineer.~~

NK: We think 1.3.12 is too long sentence to clearly understand requirement.

~~Yes I agree and have reworded this as above.~~

Q-1 Is consent by the Engineer given to specialist staff?

~~This part can be deleted.~~

Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?

We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.

~~I have reworded all, please refer to the above.~~

1.38 User Training (Deleted) ~~User Training~~(Jc71)

JC71: ~~We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.~~

NK5/6: Will delete as commented.

コメントの追加 [岡本66]: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

Note for NK: This is safety during construction, it refers to the provision of effective safety training for equipment and systems provided during under ODA construction contracts.

NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

I recommend that it be included here as a default requirement

~~1.38.1. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.~~

~~1.38.2. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.~~

~~1.38.3. User Training shall vary according to the scope of the Works however it shall generally cover the following:~~

- ~~(1) Safe system and Plant use, operation and process control.~~
- ~~(2) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements~~
- ~~(3) Training in use of all hardware and software packages.~~
- ~~(4) Laboratory control (sampling and analysis) including operation of laboratory equipment.~~
- ~~(5) Recording and reporting.~~
- ~~(6) Emergency operation procedure.~~
- ~~(7) Maintenance management procedures.~~
- ~~(8) Inventory and store control systems.~~
- ~~(9) Particular safety procedures, including:
 - ~~(a) Safe working procedure;~~
 - ~~(b) Housekeeping of the facilities;~~
 - ~~(c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and~~
 - ~~(d) Safety measures for the Works and all items of Plant.~~~~

~~1.38.4. Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.~~

~~1.38.5. The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.~~

~~1.38.6. Other requirements for User Training~~

- ~~(1) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.~~
- ~~(2) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.~~

- ~~(3) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.~~
- ~~(4) The Engineer may choose to send representatives to witness the training.~~
- ~~(5) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.~~
- ~~(6) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.~~
- ~~(7) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty six (56) days before any training commences.~~
- ~~(8) Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.~~
- ~~(9) The Contractor shall use visual media as much as possible throughout the training process.~~
- ~~(10) Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.~~
- ~~(11) The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.~~
- ~~(12) Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.~~
- ~~(13) The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.~~
- ~~(14) The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.~~
- ~~(15) Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.~~
- ~~(16) The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty six (56) days.~~
- ~~(17) Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week days.~~
- ~~(18) Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not~~

~~sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.~~

~~(19) The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.~~

1.38 Unexploded Ordnance (UXO)

NK: we considers JICA may not specify 1.39 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

MD's reply: The Employer should inform the Contractor of the likely existence of UXO and if possible remove. The Contractor shall report any UXO then found to the Employer/Engineer for further instruction. This needs to be included in JSSS and the User Guide so that both parties are aware of the other's obligations. I have edited this to make the Employer responsible and have and separated accordingly.

NK: We have no comments to 1.39. xd v

For your further information, please note that this is an Employer's Risk under GC 17.3 (d).

The problem is, that GC 17.3 places no obligation upon the Employer (who should be more aware than anyone of the possible risk) to advise of the existence, to survey and remove such UXO before bidding or after if then encountered.

This is the reason behind including this in JSSS.

This clause may need some slight modification when I gain work on the User Guide.

- 1.39.1 If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.
- 1.39.2 Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.
- 1.39.3 Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.
- 1.39.4 Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.
- 1.39.5 Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy of the further clearance certificate together with any further instructions from the Engineer.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:

- (1) **“Executing Agency”** means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer.
- (2) **“GC”** and **“PC”** followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) **“Health and Safety Officer”** or **“HSO”** means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [*Health and Safety*] as construed in accordance with JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].
- (4) **“JICA Standard Safety Specification”** or **“JSSS”** means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works.
- (5) **“Method Statement”** means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] and supplemented by JSSS 1.9 [*Contractor’s Method Statements*].
- (6) **“Operation Leader”** (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations and who can also be referred to within the OSHA definition as a “Competent Person”.
- (7) **“OSHA”** means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- (8) **“Particular Safety Specification”** means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project ~~as illustrated in Annex 1.4 [Figures and Illustrations].~~
- (9) **“Project Safety Specification”** means the document that contains Part 1 [JSSS] and Part 2 [*Particular Safety Specification*] ~~as illustrated in Annex 1.4 [Figures and Illustrations].~~
- (10) **“Project”** means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (11) **“Safety Plan”** means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the

entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor's General Obligations*] as supplemented by JSSS 1.7 [*Contractor's Safety Plans*].

- (12) “**Safety**” shall also mean “occupational health and safety” and “health and safety”.
- (13) “**User Guide**” means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.

NK: There is no “User Guide” specified in JSSS. Does it necessary to define it in JSSS?

I think as it will be published on line probably at the same time as JSSS, it does need definition and more importantly, it requires a clear statement in JSSS, that it is NOT a part of the Contract (see added clause JSSS 6.

It is my understanding that the User Guide is for the reference of the Employer only and it is probably also a good idea therefore to describe it as “An Employer’s Guide” or something like that to make it very clear.

Please refer to my earlier notes repeated above from the previous issue of the draft.

Following my further review and study, I feel that this is an important issue which if not addressed, may create unnecessary future risk for JICA

Please refer to my notes on this subject under Clause 1.3.2 and consider changing the title of the “User Guide” perhaps to “*Guide for the Use of Executing Agencies*”

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

- (1) “**Accident Response**” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [*Accident Response Plan*].
- (2) “**Confined Spaces**” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Cofferdam**” means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.
- (4) “**Dangerous Goods**” means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols. classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (5) “**Dangerous Work**” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.
- (6) “**Diver**” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.
- For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [*Diving Works*].
- (7) “**Earthwork Support**” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.

- (8) “**Elevated Access Structures**” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.
- (9) “**Emergency Response**” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.26 [*Emergency Response Plan*].
- (10) “**Falling Objects**” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.
- (11) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (12) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (13) “**Hazardous Substances**” means any substance, whether solid, liquid or gas, that may cause harm to health.
- (14) “**Hazardous Areas**” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as **Zone 0, Zone 1 or Zone 2**, where:
- (a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;
 - (b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and
 - (c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.

NK: May we know the source of Classification?

May we know if this Zones are specified in JSSS?

Classification of Zones is from the Technical Measures Document of HSE

<https://www.hse.gov.uk/comah/sragtech/techmeasareaclas.htm>

OSHA also have a classification which is more complicated.

Please be aware that in the absence of information in your draft, this is my suggestion but in every case and I rely on JICA and NK to check and confirm this. If you do not want to use this, please advise me and I will delete.

NK, 再考いたします。(現時点ではJSSSでは規定していません。)

- (15) “**Hoisting Operation**” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.
- For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [*Hoisting and Rigging*].
- (16) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.

- (17) **“Personal Fall Arrest System”** or **“PFAS”** means a fall protection system that is designed to arrest a worker in a fall from a working level.
- (18) **“Personal Fall Restraint System”** or **“PFRS”** (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.
- (19) **“Personal Protective Equipment”** or **“PPE”** means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.
- (20) **“Safety Belt”** means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.
- (21) **“Safety Harness”** means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.
- (22) **“Scaffold”** or **“Scaffolding”** means a temporary structure or structures that provide access on or from which persons work or to support Goods.
- (23) **“Skill Training”** means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (24) **“Spotter”** means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*].
- Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.
- (25) **“Trade Effluent”** means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.
- (26) **“Unexploded Ordnance”** or **“UXO”** shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.
- (27) ~~**“User Training”** means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.~~
- (28) **“Working Platform”** means a platform on or within a scaffold that is intended and designed to support persons or Goods.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

AED Automatic External Defibrillator

BMGV	Biological Monitoring Guidance Values
CPR	Cardiopulmonary Resuscitation
ODA	Official Development Aid
OJT	On Job Training
PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings
TWA	Time Weighted Average
WEL	Workplace Exposure Limits

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ACI	American Concrete Institute
ANSI	American National Standards Institute.
ASHTO	American Association of State of Highway Transportation Officials
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials.
BS	British Standard.
BS EN	British Standard European Norm.
HSE	UK Health and Safety Executive.
ISO	International Organisation for Standardisation.
ILO	International Labor Organization.
JIS	Japanese Industrial Standards.

A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.

Annex 1.2: Content of Bid Stage Safety Plan

A1.2.1 This Annex lists the required content for the Bid Stage Safety Plan which is to be provided in accordance with “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA). The Safety plan is to be included in the Bidding Documents Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF-39.

NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?

I think both are useful as the contractor should also be aware of requirements.

It is very important that the Employer/Consultant are prevented from altering the detail of this Annex in their Bidding Documents in any way, as all items are required in the Bid Stage Plan, all are coordinated with JSSS, the same structure, terminology and numbering must be used.

I suggest that this will reworded something like the following, which I will do when go back to work on the User Guide further.

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor’s Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder’s intentions, so that this can be understood and properly evaluated. (JC72)

JC72: Please add “outline (or policy?) of risk assessment” as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11) “Safety Plan” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods.....

NK5/6: To MD, we would like to ask you to add as commented.

See (2) below:

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder’s Corporate Policy on Health and Safety Management

A description of the Bidder’s corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic company policies on risk assessment and health and safety management,

(compliance with Laws of the Country and description of responsibilities and authority of the Bidder’s head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

Transferred to below

コメントの追加 [伊藤67]: Please add “outline (or policy?) of risk assessment” as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11)
“Safety Plan” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods.....

(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.

A description of the responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams.

Transferred from above

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Bidder's Safety Management System (JC73)

Refer to JSSS 1.5 [*Contractor's Safety Management System*]

~~Confirm~~ Describe how which scheme the Bidder *institutes the Safety Management System* is accredited under.

JC73: Modified in accordance with modification to JSSS1.5

NK5/6: Will modify as commented.

No comment

(6) Temporary Works

Refer to JSSS 1.37 [*Design and Management of Temporary Works*].

A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.

NK: JICA added "outline" in the last comment.

NK: I have amended

(7) Temporary Facilities on Site

The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)

NK: We consider that the above sentence is independent clause from (6) above and locate in some place.

I have edited as above

(8) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.

(9) Safety Plan for the Works

NK: May the title be Works?

I have edited as above

コメントの追加 [岡本68]:
Modified in accordance with modification to JSSS1.5

A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.

(10) Safety Plan for Dangerous Work.

Refer to JSSS 1.22 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [*Definitions and Abbreviations*] and GC 4.1 [*Contractor's General Obligations*].

(11) Permit to Work System

Refer to JSSS 1.23 [*Permit to Work System*]

A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.

(12) Safety Measures for Contractor's Equipment

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(13) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.34 [*Health and Safety Incentive Schemes*]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.

(14) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(16) Site Inspection Plan

A description of the methods for Site inspections by the HSO, types of inspection and frequency.

The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work

(17) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.

(18) Policy for Preventing Traffic Accidents

A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.

(19) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(20) Accident Response Plan

Refer to JSSS 1.23.1 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.

~~It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.~~

NK: We consider that the above sentence is independent clause from (19) above and locate in some place.

Deletion is OK

(21) Health Care Plan

Refer to JSSS 1.36 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(22) Fire Response Plan

Refer to JSSS 2.8 [*Fire Prevention*]

Details of the fire prevention services to be provided at the Site.

The Fire Response Plan required by JSSS 2.8 [*Fire Prevention*]

(23) Emergency Response Plan

Refer to JSSS 1.26 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(24) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [*Contractor's Safety Management Activities*]).

(25) Safety Induction Training

Refer to JSSS 1.20 [*Safety Induction Training*]

An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(26) Skill Training

Refer to JSSS 1.21 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.

~~(27) User Training~~

~~Refer to JSSS 1.38 [*User Training*]~~

~~An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.~~

~~(28)~~(27) Legal Requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.

Annex 1.3: Additional Contractor Forms

Attached Forms:

Form JSSS/BSD - Bidder's Safety Declaration

Form JSSS/SAR - Sample Accident Report

1

Form JSSS/BSD - Bidder's Safety Declaration

[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]

I, [insert name and position of authorised signatory], being duly authorised by [insert name of Bidder/members of joint venture ("JV")] (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.

The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.

The Bidder hereby declares that after full investigation and research of domestic resources, he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export (JC74) in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

K74: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standard?

NK5/6: To MD, we would like to ask you to modify as commented.

Please see above

The Bidder declares that he will mobilise for use upon the Works:

1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment and Temporary Works, ~~(not more than five (5) years old, not more than five (5) years old,~~ all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.

Please refer to my recommendations and notes in 1.35 and advise me of your requirement.

I note that 5 years has been deleted. Please refer to my further notes under 1.35

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability.
3. Fully inform workers about hazards;

4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand.
5. Keep accurate records of work-related injuries and illnesses.
6. Perform tests in the workplace, such as air sampling as required by the *Project* Safety Specification.
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.
9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract.
10. Post injury and illness information and data where workers can see them.
11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site*)

Or

Bidder's Head Office Health and Safety Manager*)

Name:

Date: _____

(*Delete as applicable)

Form JSSS/SAR – Sample Accident Report

[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality) (If casualty(ies) is(are) belonging to subcontractor.) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	
8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	

(above to be inserted before all reports)

FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location of accident occurrence:	
4) Brief background and apparent cause:	
5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
6) Physical damages to the Works, Site and any properties of the third parties	
7) Present medical status of casualty(ies):	
8) Present work status:	
9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
10) Accident Report Submission Date	

SUBSEQUENT REPORT INFORMATION (POST-INVESTIGATION):	
1) Cause(s) of the accident:	
2) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:	
3) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
4) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
5) Other Information:	

Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____	Contractor's Health and Safety Officer (HSO)
Receipt acknowledged by: (name): _____ (sign): _____ Report Receipt Date(s) _____ Time: _____	Engineer

(above to be inserted with detail and signatures at end of each report)

Annex 1.4: Figures and Illustrations (JC75)

JC75: Delete if nothing else other than Fig A 1.4.1

NK5/6: Will delete as commented.

Attached Documents:

~~Fig A1.4.1 — Incorporation of JSSS in Bid and Contract Documents~~ (JC76)

JC76: Move to User Guide 1.3.2

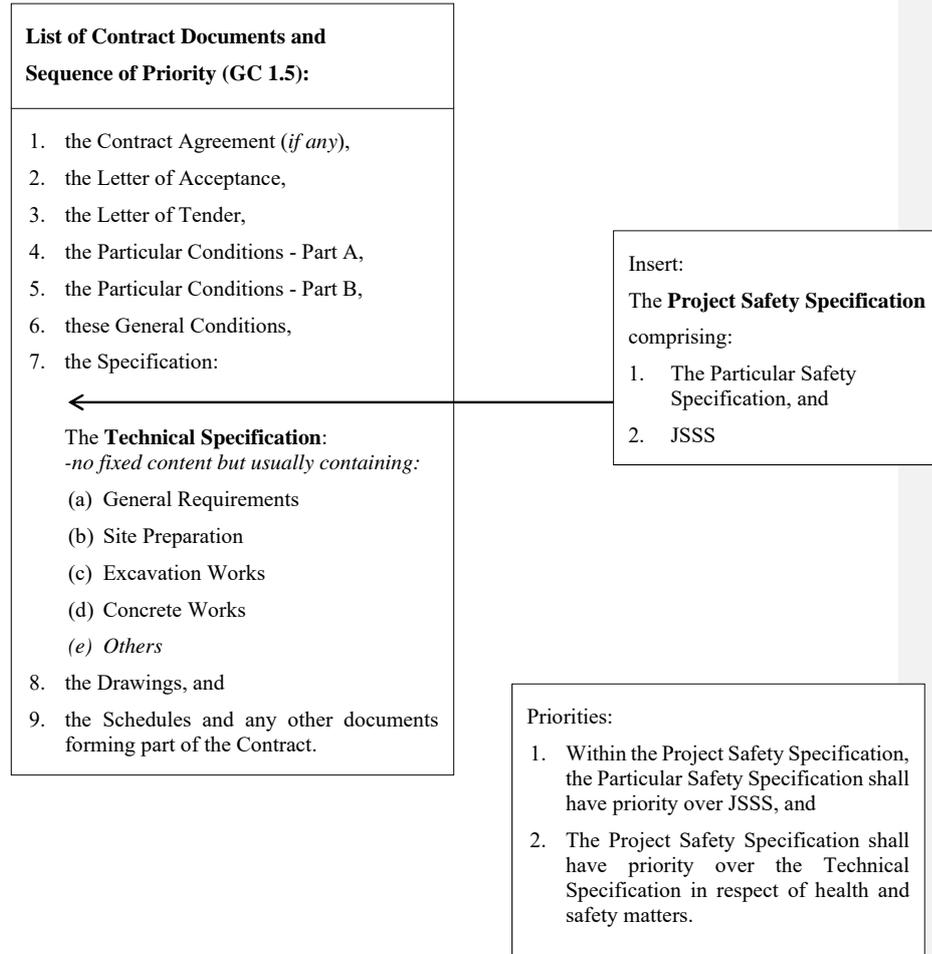
NK5/6: Will move as commented.

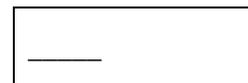
コメントの追加 [伊藤69]: Delete if nothing else other than Fig A 1.4.1

コメントの追加 [伊藤70]: Move to User Guide 1.3.2

Fig. A1.4.1

Incorporation of JSSS in Bid and Contract Documents





JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE ODA



***Japan International Cooperation Agency
(JICA)***

_____, **2020**

Prepared: DCI for NK
Issue: 7 (updated)
Revision:
Date: 13/03/2020

ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:

1) Japanese Acts, Orders and Ordinances including:

- Industrial Safety and Health Act*
- Order for Enforcement of Industrial Safety and Health Act*
- Ordinance on Industrial Safety and Health*
- Safety Ordinance for Cranes*
- Ordinance on Safety and Health of Work under High Pressure*
- Ordinance on Prevention of Anoxia, etc.*
- Ordinance on Prevention of Hazards Due to Dust*
- Explosives Control Act*
- Order for Enforcement of Explosives Control Act*
- Ordinance on Explosives Control*

2) OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.

3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.

(Suggested First aid qualification in Section 2.9):

4) The International Red Cross and Red Crescent Movement

NK: In 2.9.2 First aid kit: ANSI Z308.1 is referred to. Is the above 4) necessary?

5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)

Suggestion for JICA:

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JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

Draft
Requires further
coordination

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1. General Requirements	1.1 to 1.39	General Requirements
	Annex 1.1	Technical Definitions and Abbreviations
	Annex 1.2	Content of Bid Stage Safety Plan
	Annex 1.3	Additional Contractor Forms
	Annex 1.4	Figures and Illustrations
2.General Safety Measures	2.1	Work Environment
	2.2	Risk Control Around the Site
	2.3	Prohibition of Entry – Dangerous Work
	2.4	Spotters, Flagmen and the Like
	2.5	Fall Prevention
	2.6	Falling Objects
	2.7	Adverse Weather Requirements
	2.8	Fire Prevention
	2.9	Personal Protective Equipment (PPE) and First aid Equipment].
3. Existing Underground, Concealed and Overhead Services	3.1	Underground and Concealed Services
	3.2	Overhead Services
4. Contractor’s Equipment	4.1	General Requirements Inspection, Maintenance and Repair
	4.2	Safety Requirements
	4.3	Alternative Use
	4.4	Hired/Leased Contractor’s Equipment
5. Hoisting and Rigging	5.1	General Requirements
	5.2	Hoisting Operations
	5.3	Hoisting Equipment – Cranes
	5.4	Rigging Equipment
6. Temporary Works	6.1	General Requirements
	6.2	Earthwork Support
	6.3	Coffer Dams
	6.4	Walkways, Ladders and Stepladders
	6.5	Scaffolding
	6.6	Elevated Access Structures
	6.7	Temporary Electrical Installations
	6.8	Electric and Gas Welding and Cutting
7. Excavation Works	7.1	General
	7.2	Particular Safety Measures
	7.3	Manual Excavation
	7.4	Excavation by Blasting
8. Foundation Piling Works	8.1	General
	8.2	Particular Safety Measures
9. Concrete Works	9.1	General

		Particular Safety Measures for Insitu Concrete Work
	9.2	Reinforcement
	9.3	Formwork (including Falsework)
10. Diving Works	10.1	General
	10.2	Dive Safety Plan
	10.3	Personnel for Diving Operations
	10.4	Diving Equipment, Tools, Facilities and Workboats
	10.5	Particular Safety Measures
	10.6	Diving Accident Control Plan
	11. Railway Works	11.1
12. Road Works	12.1	
13. Bridge Works	13.1	
14. Tunnelling Works	14.1	
15. Dam Works	15.1	
16. Demolition and Alteration Works	16.1	

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

1.1 Safety Declaration

1.1.1. Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.

1.1.2. A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.

NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance1.3 and modify the 1.1.2 as follows:

1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Deflation.

1.2 General Reference Notes

1.2.1. For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].

1.2.2. The following further general reference notes apply to the content of JSSS:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
- (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an equivalent diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.
- (6) Any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer’s Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Works are being executed.

NK: There are many descriptions of “other the Site aces (if any) where the Works are being executed” in JSSS. GC defines as 1.1.6.7 “Site” means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.

May we know the following?

Q1: Which places you are assuming as other places?

Q2: Are other places specified in the Particular Safety Specificatio?

(7) Any reference in JSSS to “relevant authority” or “relevant authorities” shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.

(8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

1.3.1. JSSS shall form a part of the Project Safety Specification which in turn forms a part of the Specification as illustrated in Annex 1.4: [Figures and Illustrations], Fig A1.4.1 [Incorporation of JSSS in Bid and Contract Documents].

1.3.2. The priorities of the document comprising the Specification are as follows:

- (1) Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS,
- (2) The “Project Safety Specification” shall have priority over other parts of the Technical Specification in respect of health and safety matters.

NK: Q1: We think it needs to explain/define “Technical Specification” as same as User Guide 1.3.2 (3) The “Technical Specification” shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safety.

Q2: Is “other parts of” necessary?

1.3.3. The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.

1.4 Compliance with JSSS and Other Regulations

1.4.1. JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.

1.4.2. JSSS shall not limit the Contractor’s statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

1.4.3. The Contractor shall comply fully with the requirements of JSSS as supplemented and modified by the Particular Safety Specification.

1.4.4. Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer’s Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.

1.4.5. Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply.

NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?

1.4.6. If there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer’s consent.

NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?

1.4.7. Specified Standards and Regulations:

- (1) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.
- (2) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.4.8. Where there is any reference to OSHA and unless otherwise evident from the text, the words “team leader”, “on-site supervisor”, “on-site supervision”, “field superintendent”, “work chief” and the like shall be collectively construed as reference to the appropriate member of the Contractor’s Personnel, any reference to the “safety and health manager of the Contractor” and the like shall be construed as reference to the HSO and “The construction plan and safety and health plan”, shall be construed as the “Safety Plan”.

1.4.9. If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:

- (1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.
- (2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear.

1.4.10. Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion, during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification.

NK: We consider that this phrase may be changed to “and the Defects Notification Period”? (Though the phrase is correctly expressed.)

1.4.11. The Contractor shall fully inform his personnel, his Subcontractor’s, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.

1.5 Contractor’s Safety Management System

1.5.1. The Contractor shall institute a health and safety management system in accordance with OHSAS 18001 or ISO 45001:2018.

1.5.2. The Contractor shall state the applicable standard in the Contractor’s Safety Plan.

1.5.3. The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.

NK: JICA deleted 1.5.3 in the last comment because JICA wants for the Contractor to institute and operate HS management system but not request submission of certification. (actually and practically certificate is not much important). We think 1.5.3 should be deleted.

1.6 Checking and Validation of Submissions

1.6.1. In accordance with GC 4.9 [Quality Assurance] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval

or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination, design and supervision staff and any independent checkers as appropriate.

NK: Is this correct that we think 1.6.1 is added in relation with design of TW, etc.?

1.6.2. For the purposes of interpretation for JSSS, the final paragraph of **GC 1.8** [Care and Supply of Documents] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible.

NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.

1.7 Contractor's Safety Plans

1.7.1. The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.

1.7.2. The Safety Plans shall set out or refer to all the health and safety requirements:

- (1) that are stated in JSSS;
- (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and
- (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Works are being executed.

1.7.3. The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:

- (1) Bid Stage Safety Plan (Outline Overall Safety Plan).
- (2) Commencement Stage Safety Plan (Updated Overall Safety Plan)
- (3) Particular Safety Plans (Updated) separate plans if necessary for particular parts of the Works

NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.

1.7.4. The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level throughout the **Time for Completion of the Works**.

1.7.5. Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility and at any time throughout the **Time for Completion of the Works**.

NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?

1.7.6. Bid Stage Safety Plan:

- (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [Content of Bid Stage Safety Plan].

- (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

1.7.7. Commencement Stage Safety Plan

- (1) This shall be submitted within twenty-eight (28) days of the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site,
- (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.
- (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.

NK: Is it not necessary to specify review Commencement Stage SP?

Can we consider Commencement Stage SP is not be reviewed and the Engineer may review it and give comment in accordance with GC 1.8 Care and Supply of Documents though Japanese draft is specified to review it within 14 days?

1.7.8. Particular Safety Plans

- (1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.
- (2) Whenever required by the Engineer, the Contractor shall submit Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.

NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?

Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP.

We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan

- (3) Requirements for submission by the Contractor and response (if any) by the Engineer to Particular Safety Plans, shall be as follows:
 - (a) The Engineer may review the Particular Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;
 - (b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and
 - (c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.

- 1.7.9. The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.
- 1.7.10. Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.
- 1.7.11. The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.

1.8 Risk Assessment

- 1.8.1. In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.
- 1.8.2. The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed of all hazards and risks on the Site.
- 1.8.3. The procedural flow of risk assessment shall be as follows.
- (1) Identifying hazards.
 - (2) Evaluating risks.
 - (3) Determining measures of risk reduction or elimination.
- 1.8.4. The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:
- (1) Removal of hazards such as eliminating dangerous methods of construction.
 - (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
 - (3) Engineering measures.
 - (4) Management measures including improving skills with additional training.
 - (5) Use of PPE or improved PPE.

NK: May we know what "improved PPE" mean?

1.9 Contractor's Method Statements

- 1.9.1. The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.
- 1.9.2. Method Statements shall include details of all Permanent Works and Temporary Works with supporting documents such as:
- (1) Design studies and reports.

NK: We suggest to change to "Studies, investigations, and designs"?

- (2) Structural calculations and any other calculations.
- (3) Specifications and technical details.
- (4) Proposed construction procedure, sequence and method.
- (5) Construction resources including labour and Contractor's Equipment.

NK: We consider "worker" will be used because it are used in other Chapter though FIDIC uses "labour".

- (6) Inspection and monitoring plan.

- 1.9.3. The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.
- 1.9.4. Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.

Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:

- (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.
- (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.
- (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.
- (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.
- (5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer **for his information.**

NK: We consider "for his information" can be deleted because this phrase is not used for Safety Plan though Issue 6 used it.

1.10 Engineer's Safety Representative

- 1.10.1. Unless otherwise specified in the Particular Safety Specification, the Engineer's delegated representative at the Site shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS.
- 1.10.2. The terms of the appointment shall be in accordance with GC 3.2 [*Delegation by the Engineer*].
- 1.10.3. Whenever the term "Engineer" is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.

1.11 Safety Compliance Instructions from the Engineer

- 1.11.1. Without affecting or diminishing the Contractor's responsibility under GC 4.1 [*Contractor's General Obligations*] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.

- 1.11.2. If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [Suspension of Work] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.
- 1.11.3. If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [Suspension of Work] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer's consent and implemented such measures to ensure that no such accident can reoccur.
- 1.11.4. The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.12 Health and Safety Officer at the Site (HSO)

1.12.1. For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7 [Health and Safety], shall be construed as "Health and Safety Officer at the Site".

NK: HSO is defined in A1.1.1(3), so is 1.12.1 deleted?

1.12.2. Requirements for the HSO:

- (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.
- (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor's Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety].
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an alternative and equivalent internationally recognised qualification covering health and safety and risk management, minimum ten (10) years' work experience in construction of which minimum four (4) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country), and whom the Contractor considers is qualified to perform the duties subject also to receiving the consent of the Engineer.

NK: We considers NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot not find such person. Large contractors and European contractors may find them.

We propose to add (7) “unless otherwise specified in Particular Safety Specification” before “the HSO...”

NK: We think “two (2) years experience outside the Country” is also too high requirement for the local contractors and also Japanese.

We propose to delete “this two years outside the Country” and specify requirement in Particular Safety Specification depending on the Works.

1.12.3. Supporting Staff

NK-1: JICA commented and minutes recorded in January as follows:

7.1.1 (5) HSO’s duties:

JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.

Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?

MM: HSO should always be ultimately responsible as the leader really of the Contractor’s safety team with support duties delegated as necessary to a number of personnel including Operation Leaders. This is described in Chapter 1.10.1 and has been discussed. No change is required.

NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:

3. Common requirements in JSSS

- (4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の “The HSO shall inspect work area before starting work...” は、“The Contractor shall ...”へ変更する。*

HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.

From this idea, the HSO in the sentence “The HSO shall inspect work area before starting work...” shall be replaced with “the Contractor”.

NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).

We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor’s Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.

Based on the above idea, we want to revise some sentences below.

- (1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.*
- (2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor’s Personnel.*

NK: We propose to delete (2) from the idea of mentioned above NK-3. The supporting personnel shall be full time assignment. The Contractor shall establish system of daily check by the site staff or designated personnel for check by the Contractor and reporting by the site manager to the HSO.

- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.*
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections*

performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.

- (5) The HSO shall be expected to develop internal procedures whereby all supporting personnel, shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.
- (6) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

1.12.4. Inspections

- (1) The HSO shall be responsible for ensuring:
 - (a) That all working areas of the Site are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;
 - (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and
 - (c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*].
- (2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.

1.13 HSO - Scope of Duties and Authorities

NK: JICA added "and Authorities2 in the last comment.

1.13.1. The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.13.2. The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Work:
 - (a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;
 - (d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe

- behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;
- (e) Temporarily stopping the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.11 [*Safety Compliance Instructions from the Engineer*];
 - (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
 - (g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;
 - (h) Appointment of further supporting personnel (refer to 1.12.3 [*Supporting Staff*]);
 - (i) Instructing and training **Operation Leaders** in the health and safety aspects of their work including requirements for inspection and **confirmation** of results to HSO;

NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above:

(i) Instructing and training the person in charge of construction works and the Contractor's Equipment in the health and safety aspects of their work including requirements for inspection and reporting of results to HSO;

- (j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;
- (k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;
- (l) Planning and implementation of various training and education implementation plans;
- (m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;
- (n) Preparing regular internal and external reports on health and safety activities; and
- (o) Hazard prediction activity.

1.14 Procedure for Resuming the Works

1.14.1. If the Engineer has issued an instruction under JSSS 1.11 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [*HSO – Scope of Duties*] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.
- (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within fourteen (14) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with

the proposal subject to complying with his other obligations under the Contract, by giving seven (7) days' notice in writing of the resumption date.

To be proactive, the Engineer may give consent at any stage within the above stated time scales.

- (5) The Contractor resumes the Works or part of the Works on the due date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1. The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2. In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

NK: We think the 1.15 is same as Japanese draft, however, we feel it is not clear who take the following action.

Is there any good idea to express the H&S management shall be made by management personnel consisting of construction managers, Operation Leaders, HSO (for reference I added personnel in charge of the activities below.).

- (1) Overall Safety Management Activities:
 - (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); *(by construction managers, Operation Leaders, HSO)*
 - (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and *(by construction managers, HSO)*
 - (c) Monitoring the implementation of the Safety Plan. *(by HSO)*
- (2) Safety Management of Contractor's Personnel:

NK: We would like to add "Daily" before Safety in (2) to distinguish from (1).

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; *(by construction managers, HSO)*
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures; *(by construction managers, Operation Leaders)*
- (c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: *(by construction managers, Operation Leaders)*
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
- (d) Instruction and management of safety education and training; *(by construction managers, HSO)*
- (e) Instruction and management of all safety measures; and *(by construction managers, Operation Leaders, HSO)*
- (f) **Joint Site Safety Inspections.** *(by construction managers, Operation Leaders, HSO)*

NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.

1.16 Joint Site Safety Inspections

- 1.16.1. In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.
- 1.16.2. Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.16.3. Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.16.4. The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.
- 1.16.5. The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.17 Compliance Monitoring and Auditing

- 1.17.1. The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured and that such compliance is monitored efficiently and transparently at all times, for which purpose the Contractor shall:

NK: We propose to divide the above to two sentences because the above sentence is long and contains two subjects.

- (1) Create checklists for monitoring.
 - (2) Carry out regular and random inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents.
 - (4) Create storage and filing systems for the monitoring records.
 - (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer.
- 1.17.2. Safety inspections are intended to search for risks and hazards, which present a threat to safe working.
 - 1.17.3. The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:
 - (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
 - (2) Are the Safety Plan requirements being met?
 - (3) Is there documented proof of compliance?
 - (4) Is health and safety training effective?
 - (5) Is the Contractor's health and safety management system working effectively?
 - 1.17.4. The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.
 - 1.17.5. The audit team procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer. Unless otherwise consented to by the Engineer, the audit shall be headed by a senior member of the Contractor's head office health and safety team.
 - 1.17.6. If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.

- 1.17.7. The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.
- 1.17.8. The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.
- 1.17.9. The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems; they shall not replace the regular health and safety inspections.

NK: We think the above sentence is better to be divided two sentences.

- 1.17.10. The audits shall be conducted ~~on a random basis~~ at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.

~~1.17.11. The Engineer may at his option 6a random health and safety audit by giving 72 hours' written notice to the Contractor.~~

NK: JICA deleted in the last comment. We also consider the Engineer does not do auditing but inspection/supervise the Contractor's activities, and agree to delete this.

~~1.17.12. Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.~~

NK: JICA commented "Such "not to do" should not be included in the specification." and deleted this sentence in the last comment. We agree to delete this because the auditing team cannot come to the site from Headquarters located in other countries by short notice, and the ISO auditing is made by around one month notice or as scheduled.

- 1.17.13. An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.
- 1.17.14. The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.18 Proper Placement of Contractor's Personnel

- 1.18.1. To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.
- 1.18.2. In compliance with GC 6.9 [*Contractor's Personnel*], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability; ~~all~~ shall be equipped with correct ~~t~~-PPE, tools, equipment and safety equipment.
- 1.18.3. Labourers and unskilled workers shall never be assigned to any work on Site on their own; ~~all~~ shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.
- 1.18.4. The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.
- 1.18.5. The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.

- 1.18.6. The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.
- 1.18.7. Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:
- (1) Work content and work environment.
 - (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability.
 - (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
 - (4) Allocation of an achievable and safe work volume and time.
 - (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].
- 1.18.8. If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.
- 1.18.9. The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.
- 1.18.10. The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that ~~he~~ the HSO resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.

NK: We think it is better to replace "he" with "the HSO" though he/she is nowadays used.

1.19 Safety Training Generally

- 1.19.1. The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.
- 1.19.2. The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.
- 1.19.3. Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.

1.20 Safety Induction Training

- 1.20.1. Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom ~~he~~ the HSO is responsible, including the

Employer's Personnel and all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed at the request of the Employer or Engineer.

1.20.2. The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.
- (5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. (Refer to separate requirements for **special training**).

NK: May we know where we can find to refer to special training?

- (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.
- (7) Maintaining all working areas in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.
- (9) Firefighting; actions, precautions and control.
- (10) Health and safety rules.
- (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

1.20.3. Practical on-Site demonstrations shall be included.

1.20.4. Training Personnel

- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
- (2) All trainers shall be fluent in the language of the persons to be trained.
- (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.

1.20.5. Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.21 Skill Training

1.21.1. The Contractor is reminded of his obligations under GC 6.9 [*Contractor's Personnel*] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced

in their respective trades or occupations. The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.

- 1.21.2. The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects.

Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.

This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion.

Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply:.

- (1) To compliment this OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to provide basic skill training to develop the ability of local counterpart trainee operation leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots.
- (2) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer **for his consent.**

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

Details of such training shall be submitted with the Bid Stage Safety Plan.

NK: This request is specified in Annex 1.2 (24) as Outline shall be submitted in Bid Stage SP.

- 1.21.3. Subject to receiving the consent of the Engineer, the Contractor may demobilise the imported resources on the understanding that he is satisfied **that candidates** that have been successfully **qualified** and that they are able to act fully in accordance with the requirements of the Contract.

NK: This sentence may be necessary to be reviewed.

- 1.21.4. It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice **in** based upon capability **in** accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.

- 1.21.5. Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full

compliance with GC 6.9 [*Contractor's Personnel*]. The Contactor shall report the names of any such Contractor's Personnel to the Engineer **for his consent**.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

1.21.6. Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

1.22 Dangerous Work

1.22.1. Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.22.2. Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.22.3. The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [*Permit System*] that is to be worn conspicuously and be available for validation by the Engineer.

1.22.4. A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.

1.22.5. The Contractor shall select, train and equip a specialist rescue team or teams of selected workers at the Site, who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue.

1.22.6. Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction ~~belts~~/harnesses/ropes measures.

NK: Harness is basically used now and belts is not, so deletion of belt is made.

1.22.7. The requirement for rescue teams and rescue equipment shall **be as** specified in the Particular Safety Specification.

1.22.8. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.

1.22.9. The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.

1.22.10. Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.

1.22.11. For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [*Prohibition of Entry – Dangerous Work*].

1.22.12. Hazardous Substances.

- (1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialist Subcontractor(s) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.

- (2) The Contractor shall obtain the Engineer's consent for such specialist Subcontractors and their detailed Safety Plans and Method Statements shall also be submitted to the Engineer in accordance with JSSS 1.7 [*Contractor's Safety Plans*] and JSSS 1.9 [*Contractor's Method Statements*].

1.23 Permit to Work System

1.23.1. The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.

1.23.2. The system shall be designed to control safety for all types of high-risk work likely to be encountered, including for example:

- (1) Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3 Example of Dangerous Work.
- (2) Work in elevated positions, for example, transmission towers ladders and scaffolding, roof or ceiling work.
- (3) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.
- (4) Diving Works.

NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.

1.23.3. The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.

1.23.4. Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.

1.23.5. The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

1.24.1. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed.

NK-1: JICA commented to modify and add "so specified in the Specification" to 1.20.2 in Issue 6.

NK consider that "as specified in Particular Safety Specification" between "the Works," and "the Contractor if we follow JICA's comment.

NK-2: JICA commented that they want to use "as specified in Particular Safety Specification" more than "unless otherwise specified in Particular Safety Specification" because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSS)

Can you specify as JICA's request to use "as specified in PSS?"

NK-3: JICA want to clarify who "other persons who are entitled to be on the Site" are, and where "other places (if any) are.

1.24.2. The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.

1.24.3. **Unless otherwise specified in the Particular Safety Specification**, medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed.

NK: JICA want to clarify where "other places (if any) are."

1.24.4. The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.

1.24.5. Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example include:

- (1) Medical staff to be assigned at the Site.
- (2) Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.
- (3) Emergency **medivac** services where necessary.

NK: We feel that the provision of medivac services seems excessive unless health insurance can cover it.

- (4) Medical Facilities on the Site together with description of equipment and consumables. **in**
- (5) Temporary water and power supply to maintain use during mains supply failure.
- (6) Type of communication facilities and measures for emergency response.
- (7) Deployment of appropriate first aid appliances, aids, instruments and medicines.
- (8) First aid training, appointment of first aiders and dissemination of information.

1.24.6. Where the Works include the following for example, the Contractor shall train selected Contractor's Personnel to perform rescue operations in a safe manner in the event of any accident:

- (1) Work on or near existing electrical equipment, cables, wiring, services and systems.
- (2) Dangerous Work **such as Confine Spaces, work at height.**

NK: We consider describing example as above.

- (3) Diving Work.
- (4) Similar special circumstances.

1.24.7. All rescue team members in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [*Personal Protective Equipment (PPE) and First Aid Equipment*].

1.24.8. Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by **OSHA** and as referred to in JSSS 2.9 [*Personal Protective Equipment (PPE) and First aid Equipment*].

NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.

1.25 Measures at the Time Accidents Occur

1.25.1. When an accident occurs, **the HSO the Contractor** shall immediately discontinue the concerned work, **inform the Engineer** and take all efforts to:

NK: JICA added in the last comment.

NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6.

- (1) Safely locate and extract casualties.
- (2) Provide first aid treatment at the Site.

- (3) Implement Secondary accident prevention activities, including:
 - (a) Preserving the accident site, make safe and prevent anyone interfering or entering;
 - (b) Discontinuing construction work related to or in the vicinity of the accident; and
 - (c) Implementing any further measures instructed by the Engineer.

1.25.2. Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident.
- (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The Accident Report shall include details of ~~the HSO's~~ **the Contractor's** recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [*Additional Contractor Forms*].

1.25.3. For resumption of work procedures, refer to JSSS 1.14 [*Procedure for Resuming the Works*].

1.26 Emergency Response Plan

1.26.1. To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and as far as reasonably possible, shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.

The Contractor shall ~~the~~ take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have reasonably avoided or overcome or lessened the effects.

NK-1: Can we delete one of two "reasonably possible" above?

NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).

1.26.2. The Contractor shall keep all areas of the Site, all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, free from surface water and ground water at all times and by whatever means are necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.26.3. Where, due to the location of the Site, there is a risk of **flooding**, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage and flooding arising from such flooding, earthquake or volcanic activity.

NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed and to any third parties and neighbours and property not connected with the Works but potentially affected thereby.
- (2) Provision of temporary support to all sides and soffits of excavations or **portal of tunnelling** of sufficient strength, durability and suitability.

NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel.

- (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.26.4. Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*] and JSSS 1.9 [*Contractor's Method Statements*].

1.26.5. Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract.

NK: We consider that the Contractor may have difficulty to assume what activities can be made.

We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.

1.26.6. The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels.

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

1.26.7. The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.26.8. Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and other places (if any) where the Works are being executed.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.26.9. If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.26.10. The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.

1.26.11. For further measures and requirements refer to JSSS 2.7 [*Adverse Weather Requirements*].

1.27 Contractor's Safety Committee and Regular Safety Meetings

1.27.1. The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.27.2. Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of Contractor's Personnel.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.27.3. The HSO shall be the chairman of the Safety Committee.

1.27.4. The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **occurred in the previous month and measures to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (f) Safety instructions received from the Engineer;
- (g) Items to be coordinated with police, fire department and other related organisations;
- (h) Compliance and registration requirements under the Laws of the Country;
- (i) Safety and health awards, media attention and the like; and
- (j) Other matters.

NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion.

1.27.5. Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.28 Engineer's Regular Safety Meetings

1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **in the previous month** and measures **to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Status of resolution of previous problems;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country; and
- (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.
- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.
- (5) The Engineer shall issue a formal instruction for any variation requests.

1.29 Project Safety Committee

1.29.1. On larger Projects with multiple contract packages and contractors and if so stated in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.29.2. Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.29.3. The Chairman of the Safety Committee shall be the Employer.

1.29.4. The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.

NK: JICA commented to delete this as holding meetings are not monthly basis but optional.

We propose "periodically as requested by the Employer" and ask you to reply to this comment as reply is not mentioned in the document with notes.

1.29.5. The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

NK: JICA commented to replace "shall" with "may" in Clauses 1.29.3 to 1.29.5.

We want to ask you to reply to this comment as reply is not mentioned in the document with notes.

1.30 Health and Safety Coordination with Other Contractors

NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer.

We propose to move them to the User Guide.

1.30.1. Refer to GC 2.3 [*Employer's Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer,
- (3) the personnel of any legally constituted public authorities,

... who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] and GC 4.18 [*Protection of the Environment*].

The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.

When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.

1.30.2. The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.30.3. If any other contractors are employed by the Employer or if any legally constituted public authorities responsible to the Employer is working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: as and when considered necessary by Engineer.
- (2) Unless otherwise agreed, attendees shall include representatives of:
 - (a) The Employer;
 - (b) The Contractor;
 - (c) Other contractors employed by the Employer; and
 - (d) Personnel of any legally constituted public authorities.

NK: We considers it is easy to understand attendee by adding "who may be employed in the execution on or near the Site of any work not included in the Contract." to (d) though it mentioned in the first sentence.

- (3) Agenda should relate to coordination among different contractors including for example:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;

- (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;
- (c) Accidents, injuries **in the previous period** and measures **to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

- (d) Status of resolution of previous problems;
- (e) Items to be coordinated with police, fire department and other related organisations;
- (f) Compliance and registration requirements under the Laws of the Country;
- (g) Safety and health awards, media attention and the like; and
- (h) Other matters.

1.30.4. Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the Engineer's monthly progress report.

1.31 Safety Statistics

1.31.1. The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.31.2. Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, casualties, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff.
- (9) Number of Contractor's safety meetings and frequency.
- (10) Number of **candidates** given safety induction and other training.

NK: Are "candidates" replaced with "Contractor's Personnel"?

- (11) Number of safety inspections,
- (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (13) Instructions issued for unsafe behaviour or unsafe site conditions.
- (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (15) Engineer's Instructions issued for work suspension.

(16) HSO instructions issued for work stoppage.

(17) Others.

1.31.3. All data shall be in a format and content given consent by the Engineer.

1.31.4. The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.31.5. The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [*Safety Reports*].

1.32 Safety Reports

1.32.1. The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

(1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken **for** improvement.

NK Is it necessary to add "for"?

(2) Contractor/HSO and Joint Site Safety Inspections.

(3) Weekly Safety Report: summary of safety matters of the week.

(4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [*Progress Reports*].

1.33 Health and Safety Records

1.33.1. The Contractor shall keep health and safety records for the following:

(1) Accidents, fatalities, near-misses.

(2) Inspection records and checklists.

(3) Meetings for safety and health management.

(4) Monitoring of safety and health management activities.

(5) Health and safety education and training for the Contractor's Personnel.

(6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.

(7) Work environment records and other records required by JSSS Chapter 2 [*General Safety Measures*] and other parts of JSSS.

1.33.2. All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.

1.33.3. A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [*Safety Reports*].

1.34 Health and Safety Incentive Schemes

1.34.1. The Contractor shall consistently enforce **legitimate** work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.

NK: May we know if the word of "legitimate" (conforming to the law or to rules) is necessary?

We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.

- 1.34.2. It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.
- 1.34.3. It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.
- 1.34.4. Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.
- 1.34.5. Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.
- 1.34.6. The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.
- 1.34.7. As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.
- 1.34.8. The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [*Safety Reports*].

1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE

- 1.35.1. Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

- 1.35.2. The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by **the HSO (or his delegated and technically qualified assistant)** at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed **by the HSO**, thereby certifying the items as being **safe for use**.

NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system.

We want to ask you to modify the 1.35.2 as the above.

If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as **not being safe for use**, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

1.35.3. The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor.

If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.35.4. As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

- (1) New and up to date Personal Protective Equipment (PPE) and **other safety equipment** and **Temporary Works** of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.
- (2) New or recent Contractor's Equipment and **Temporary Works** (not more than **five (5) years old**, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.

Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment by an independent testing, inspection and certification agency to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.

NK: We considers in actual basis as follows:

Q1: Is Scaffoldings classified in (1) TW? If so, no need to discuss the inspection of Scaffoldings before shipment? Shall Scaffoldings be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?

Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffoldings, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.

Can we delete "and Temporary Works" in (2)?

Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.

We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies owns old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too.

If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.

We propose to delete the 2nd sentence above.

In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."

JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair or

maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."

Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old.

The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?

1.36 Health Matters

- 1.36.1. The Contractor is reminded of his obligations under GC 6.7 [*Health and Safety*] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.
- 1.36.2. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed.
- 1.36.3. Occupational health care shall be provided by the Contractor and shall include for example:
- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [*Working Environment*]).
 - (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
 - (3) Frequent or excessive manual handling of loads, stress and fatigue.
 - (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability.
- 1.36.4. The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:
- (1) Health care staff to be assigned at the Site.
 - (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
 - (3) Healthcare services to be provided including lectures and education on health matters.
 - (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
 - (5) Occupational **H**healthcare proposal.
 - (6) Temporary water and power supply to maintain use during mains supply failure.
 - (7) Type of communication facilities and measures for **emergency response**.

NK: May we know example of emergency response?

- 1.36.5. Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed.

1.36.6. Report of Serious Illness

- (1) The Contractor shall inform the Engineer and submit details of any serious illness.

NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.?

- (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures.

NK: Is "HSO" replaced with Contractor as same as (2) above?

- (4) The Engineer is to be consulted on the types of illness for which reports are to be informed.

1.37 Design and Management of Temporary Works

1.37.1. Unless otherwise specified in the Particular Safety Specification, **Bidders the Contractor** are required to comply with BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.

1.37.2. An alternative standard is acceptable by reference to JSSS 1.4.7 [*Specified Standards and Regulations*] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works including **Class A Falsework**.

NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specified specially referring to the following BS5975?

Section 1: General 1 Scope "This guidance is also applicable to the design of what is termed class A falsework 1) in BS EN 12812:2004, the design of which is specifically excluded from BS EN 12812:2004.

1.37.3. It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.

1.37.4. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.

1.37.5. The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.

1.37.6. Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].

JC: JICA commented as follows:

Issue 6 1.34.8 Too much to require the Contractor name all the specialist staff at the Bid stage. It is also excessive to require consent of the Engineer for those specialist staff.

"Necessary qualification" can be combined with 1.34.12 or 1.34.13.

Issue 6 1.34.9 If comply with JSSS1.9, all the specialist staff shall be appointed before the commencement, and subject to the Engineer's consent.

NK: From this comment, the 1.37.12 below is enough requirement. 1.37.6 above specifies to refer to 1.12, which 1.12 is for HSO, it seems difficult to apply for personnel of TW.

As 1.3.12 specifies requirement and necessity of consent of the Engineer, we propose to delete 1.3.6.

1.37.7. Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [*Contractor's Method Statements*]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer has no obligation under the Contract to review Temporary Works design, however he may choose to do so for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975. The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [*Engineer's Duties and Authority*] Sub-Subclause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.

1.37.8. Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:

- (1) Appointment of appropriately qualified and experienced staff.
- (2) Preparation of adequate Temporary Works designs.
- (3) Independent internal or external checking of the Temporary Works Design.
- (4) Preparation of a Temporary Works register and records
- (5) Pre-erection inspection of all Temporary Works, including materials, components and equipment.
- (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to:
 - (a) Check that the Temporary Works have been erected in accordance with the design and issue by the **HSO-Contractor** of a suitable sign showing it **as complete and safe to use;** and
 - (b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the **HSO-Contractor of a suitable sign showing that it is ready for dismantling**

NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause,

we consider HSO will be replaced with Contractor as JICA commented:

Should it be HSO? When BS5975 applies. TWC/TWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?

1.37.9. The **Safety Plan Method statement** shall include measures to ensure that the design, erection, maintenance, dismantling and removal are all carried out by competent and experienced individuals and in a controlled and closely supervised manner.

NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?

- 1.37.10. For further information on **Method Statements** refer to JSSS 1.9 [*Contractor's Method Statements*].
- 1.37.11. For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [*Inspection and Monitoring of Temporary Works*].
- 1.37.12. Whether there is or is not any legal requirement under the Laws of the Country for academic, educational or vocational qualification, all of the Contractor's Temporary Works specialist staff **and the specialist staff of Temporary Works Subcontractors** shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate, work experience in construction and in Temporary Works design or supervision as appropriate and whom the Contractor ascertains are qualified to perform the duties and **have been given consent by the Engineer**.

NK: We think 1.3.12 is too long sentence to clearly understand requirement.

Q-1 Is consent by the Engineer given to specialist staff?

Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?

We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.

1.38 User Training

NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

- 1.38.1. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.
- 1.38.2. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.
- 1.38.3. User Training shall vary according to the scope of the Works however it shall generally cover the following:
- (1) Safe system and Plant use, operation and process control.
 - (2) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements
 - (3) Training in use of all hardware and software packages.
 - (4) Laboratory control (sampling and analysis) including operation of laboratory equipment.
 - (5) Recording and reporting.
 - (6) Emergency operation procedure.
 - (7) Maintenance management procedures.
 - (8) Inventory and store control systems.
 - (9) Particular safety procedures, including:
 - (a) Safe working procedure;
 - (b) Housekeeping of the facilities;

- (c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and
 - (d) Safety measures for the Works and all items of Plant.
- 1.38.4. Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.
- 1.38.5. The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.
- 1.38.6. Other requirements for User Training
- (1) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.
 - (2) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.
 - (3) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.
 - (4) The Engineer may choose to send representatives to witness the training.
 - (5) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.
 - (6) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.
 - (7) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty-six (56) days before any training commences.
 - (8) Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.
 - (9) The Contractor shall use visual media as much as possible throughout the training process.
 - (10) Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.
 - (11) The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.
 - (12) Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.
 - (13) The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.
 - (14) The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.

- (15) Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.
- (16) The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty-six (56) days.
- (17) Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week-days.
- (18) Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.
- (19) The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.

1.39 Unexploded Ordnance (UXO)

NK: we considers JICA may not specify 1.39 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

MD's reply: The Employer should inform the Contractor of the likely existence of UXO and if possible remove. The Contractor shall report any UXO then found to the Employer/Engineer for further instruction. This needs to be included in JSSS and the User Guide so that both parties are aware of the other's obligations. I have edited this to make the Employer responsible and have and separated accordingly.

NK: We have no comments to 1.39. xd v

- 1.39.1. If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.
- 1.39.2. Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.
- 1.39.3. Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.
- 1.39.4. Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.
- 1.39.5. Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance

certificate. Work shall resume in the affected areas after the Contractor has received a copy of the further clearance certificate together with any further instructions from the Engineer.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:

- (1) “**Executing Agency**” means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer.
- (2) “**GC**” and “**PC**” followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) “**Health and Safety Officer**” or “**HSO**” means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [*Health and Safety*] as construed in accordance with JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].
- (4) “**JICA Standard Safety Specification**” or “**JSSS**” means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works.
- (5) “**Method Statement**” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] and supplemented by JSSS 1.9 [*Contractor’s Method Statements*].
- (6) “**Operation Leader**” (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations and who can also be referred to within the OSHA definition as a “Competent Person”.
- (7) “**OSHA**” means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- (8) “**Particular Safety Specification**” means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project as illustrated in Annex 1.4 [*Figures and Illustrations*].
- (9) “**Project Safety Specification**” means the document that contains Part 1 [*JSSS*] and Part 2 [*Particular Safety Specification*] as illustrated in Annex 1.4 [*Figures and Illustrations*].
- (10) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (11) “**Safety Plan**” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the

entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor's General Obligations*] as supplemented by JSSS 1.7 [*Contractor's Safety Plans*].

- (12) “**Safety**” shall also mean “occupational health and safety” and “health and safety”.
- (13) “**User Guide**” means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.

NK: There is no “User Guide” specified in JSSS. Does it necessary to define it in JSSS?

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

- (1) “**Accident Response**” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [*Accident Response Plan*].
- (2) “**Confined Spaces**” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Cofferdam**” means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.
- (4) “**Dangerous Goods**” means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (5) “**Dangerous Work**” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.
- (6) “**Diver**” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.

For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [*Diving Works*].

- (7) “**Earthwork Support**” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.
- (8) “**Elevated Access Structures**” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.
- (9) “**Emergency Response**” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.26 [*Emergency Response Plan*].
- (10) “**Falling Objects**” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.

- (11) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (12) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (13) “**Hazardous Substances**” means any substance, whether solid, liquid or gas, that may cause harm to health.
- (14) “**Hazardous Areas**” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as **Zone 0, Zone 1 or Zone 2, where:**
 - (a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;
 - (b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and
 - (c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.

NK: May we know the source of Classification?

May we know if this Zones are specified in JSSS?

- (15) “**Hoisting Operation**” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.

For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [*Hoisting and Rigging*].
- (16) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.
- (17) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level.
- (18) “**Personal Fall Restraint System**” or “**PFRS**” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.
- (19) “**Personal Protective Equipment**” or “**PPE**” means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.
- (20) “**Safety Belt**” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.
- (21) “**Safety Harness**” means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.

- (22) “**Scaffold**” or “**Scaffolding**” means a temporary structure or structures that provide access on or from which persons work or to support Goods.
- (23) “**Skill Training**” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (24) “**Spotter**” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*].
- Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.
- (25) “**Trade Effluent**” means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.
- (26) “**Unexploded Ordnance**” or “**UXO**” shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.
- (27) “**User Training**” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.
- (28) “**Working Platform**” means a platform on or within a scaffold that is intended and designed to support persons or Goods.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

AED	Automatic External Defibrillator
BMGV	Biological Monitoring Guidance Values
CPR	Cardiopulmonary Resuscitation
ODA	Official Development Aid
OJT	On Job Training
PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings
TWA	Time Weighted Average
WEL	Workplace Exposure Limits

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ACI	American Concrete Institute
ANSI	American National Standards Institute.

ASHTO	American Association of State of Highway Transportation Officials
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials.
BS	British Standard.
BS EN	British Standard European Norm.
HSE	UK Health and Safety Executive.
ISO	International Organisation for Standardisation.
ILO	International Labor Organization.
JIS	Japanese Industrial Standards.

A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.

Annex 1.2: Content of Bid Stage Safety Plan

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan which is to be provided in accordance with “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA). The Safety plan is to be included in the Bidding Documents Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF-39.

NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?

A1.2.2. The Bid Stage Safety Plan shall be an outline plan which must, cover each of the items listed below with sufficient detail to demonstrate that the Bidder understands the requirements and with sufficient information to indicate the Bidder’s intentions, so that this can be understood and properly evaluated:

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder’s corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder’s head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder’s Personnel

A description of the health and safety management organisation at Site headed by the Bidder’s Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor’s Personnel involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Bidder’s Safety Management System

Refer to JSSS 1.5 [*Contractor’s Safety Management System*]

Confirm which scheme the Bidder is accredited under.

(6) Temporary Works

Refer to JSSS 1.37 [*Design and Management of Temporary Works*].

A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the **outline of** safety measures to be applied to ensure compliance with the requirements.

NK: JICA added " outline" in the last comment.

Include a description of the scope of work for the principal specialist persons to be employed in the management and design of Temporary Works and the arrangements for controlling risks arising from the design, erection, maintenance, dismantling and removal of Temporary Works.

The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)

NK: We consider that the above sentence is independent clause from (6) above and locate in some place.

(7) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.

(8) Safety Plan for the Permanent Works

NK: May the title be Works?

A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.

(9) Safety Plan for Dangerous Work.

Refer to JSSS 1.22 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [*Definitions and Abbreviations*] and GC 4.1 [*Contractor's General Obligations*].

(10) Permit to Work System

Refer to JSSS 1.23 [*Permit to Work System*]

A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.

(11) Safety Measures for Contractor's Equipment

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(12) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.34 [*Health and Safety Incentive Schemes*]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.

(13) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and

Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(14) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(15) Site Inspection Plan

A description of the methods for Site inspections by the HSO, types of inspection and frequency.

The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work

(16) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.

(17) Policy for Preventing Traffic Accidents

A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.

(18) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(19) Accident Response Plan

Refer to JSSS 1.23.1 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.

It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.

NK: We consider that the above sentence is independent clause from (19) above and locate in some place.

(20) Health Care Plan

Refer to JSSS 1.36 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(21) Fire Response Plan

Refer to JSSS 2.8 [*Fire Prevention*]

Details of the fire prevention services to be provided at the Site.

The Fire Response Plan required by JSSS 2.8 [*Fire Prevention – Additional Requirements*].

(22) Emergency Response Plan

Refer to JSSS 1.26 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(23) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [*Contractor's Safety Management Activities*]).

(24) Safety Induction Training

Refer to JSSS 1.20 [*Safety Induction Training*]

An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(25) Skill Training

Refer to JSSS 1.21 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.

(26) User Training

Refer to JSSS 1.38 [*User Training*]

An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.

(27) Legal requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.

Annex 1.3: Additional Contractor Forms

Attached Forms:

Form JSSS/BSD - Bidder's Safety Declaration

Form JSSS/SAR - Sample Accident Report

Form JSSS/BSD - Bidder's Safety Declaration

[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]

I, [insert name and position of authorised signatory], being duly authorised by [insert name of Bidder/members of joint venture (“JV”)] (hereinafter referred to as the “Bidder”) to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.

The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.

The Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder declares that he will mobilise for use upon the Works:

1. New and up to date PPE and other safety equipment **and Temporary Works** of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment **and Temporary Works** (not more than **five (5) years old**, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability.
3. Fully inform workers about hazards;
4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site and other places (if any) where the Works are being executed, in a language and vocabulary they can understand.
5. Keep accurate records of work-related injuries and illnesses.
6. Perform tests in the workplace, such as air sampling as required by the Safety Specification.
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.

8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.
9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract.
10. Post injury and illness information and data where workers can see them.
11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site*)

Or

Bidder's Head Office Health and Safety Manager*)

Name:

Date: _____

(*Delete as applicable)

Form JSSS/SAR – Sample Accident Report

[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality) (If casualty(ies) is(are) belonging to subcontractor,) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	
8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	

(above to be inserted before all reports)

FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location of accident occurrence:	
4) Brief background and apparent cause:	
5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
6) Physical damages to the Works, Site and any properties of the third parties	
7) Present medical status of casualty(ies):	
8) Present work status:	
9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
10) Accident Report Submission Date	

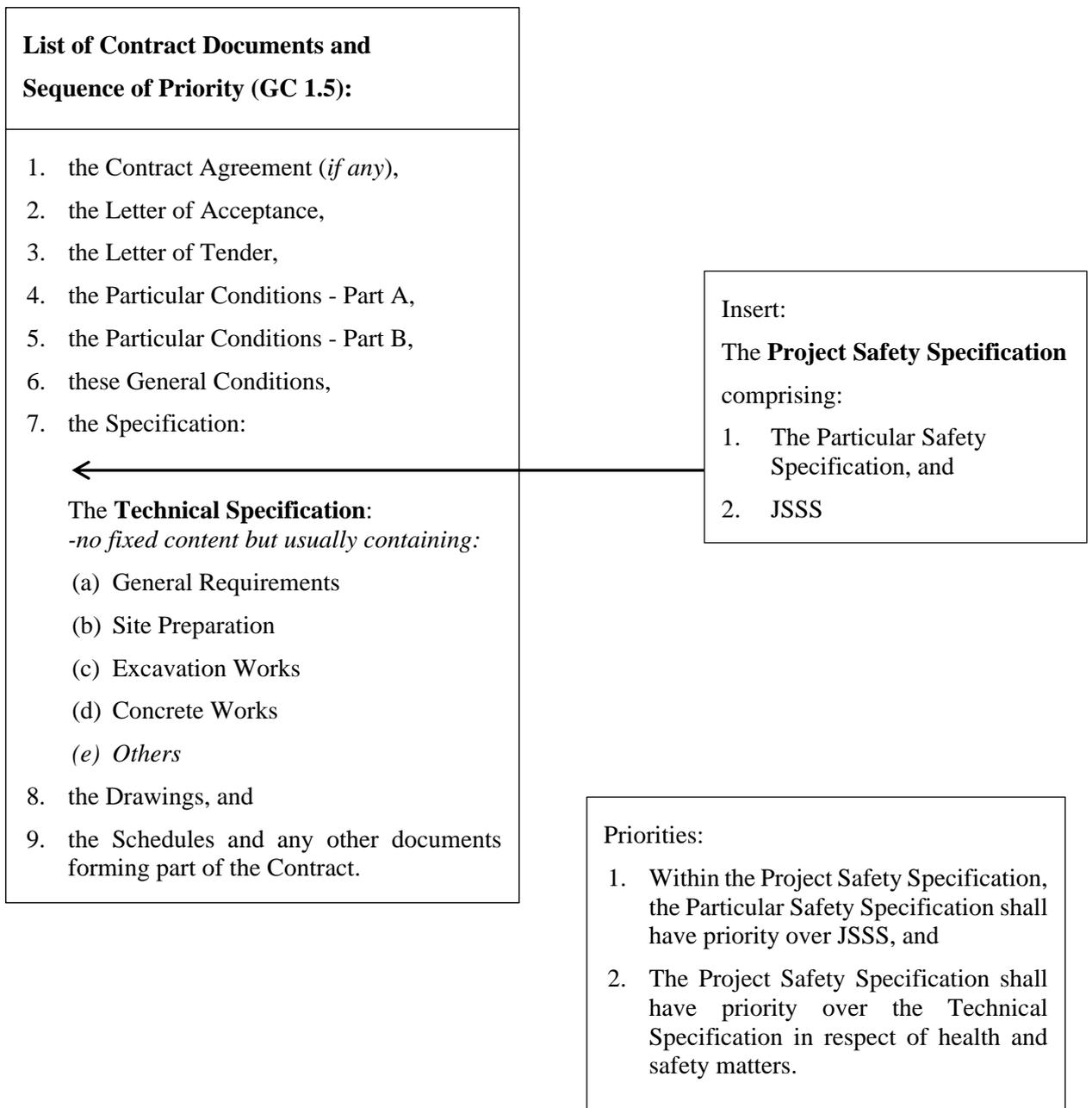
Annex 1.4: Figures and Illustrations

Attached Documents:

Fig A1.4.1 Incorporation of JSSS in Bid and Contract Documents

Fig. A1.4.1

Incorporation of JSSS in Bid and Contract Documents



NK Comment to JICA Comments(20200506)

JICA Comment and Revision (20200423)

Yellow marking and red letters : Comments by NK (20200319) & (20200327)

Green – subsequent changes made by DCI, Replied to NK inquiry and added DCI notes (20200325)

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE ODA



***Japan International Cooperation Agency
(JICA)***

_____, 2020

Prepared: DCI for NK
Issue: 7 (updated)
Revision:
Date: 25/03/2020

NK Comment to JICA Comments(20200506)

JICA Comment and Revision (20200423)

Yellow marking and red letters : Comments by NK (20200319) & (20200327)

Green – subsequent changes made by DCI, *Replied to NK inquiry and added DCI notes* (20200325)

Copy of Mail from Mr. Ito, JICA on 2020/4/23

Dear Sakoda-san,

Very sorry for this late reply with respect to Chapter 1 and User guide.

Regarding Chapter 1, we have sometimes modified directly the text, and sometimes put comments.

After several times of exchange between us, please be informed of the followings:

- 1) As for the modifications of text with a comment highlighted in light blue, you don't have to examine the contents any more. You are requested only to check the quality of language.
- 2) As for the modifications of text without any comment, same. You are requested only to check the quality of language.
- 3) The modifications of text with a comment highlighted in green are sometimes questions and sometimes requests for advice. So, would you please come up with an appropriate solution?

As for the User Guide, our comments are still preliminary since the draft was still preliminary one.

We have, nevertheless, worked in the same manner as mentioned above as long as practicable.

Thank you for your consideration,

ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:

1) Japanese Acts, Orders and Ordinances including:

- Industrial Safety and Health Act*
- Order for Enforcement of Industrial Safety and Health Act*
- Ordinance on Industrial Safety and Health*
- Safety Ordinance for Cranes*
- Ordinance on Safety and Health of Work under High Pressure*
- Ordinance on Prevention of Anoxia, etc.*
- Ordinance on Prevention of Hazards Due to Dust*
- Explosives Control Act*
- Order for Enforcement of Explosives Control Act*
- Ordinance on Explosives Control*

2) OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.

3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.

4) The International Red Cross and Red Crescent Movement (ICRCM)

NK: In 2.9.2 First aid kit: ANSI Z308.1 is referred to. Is the above 4) necessary?

True: ANSI is the kit but first aid courses will also be necessary (see added clauses in Section 2.9 and Chapter 10 also). ICRCM seems to be a convenient and internationally applicable basis.

5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)

Suggestion for JICA:

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JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

Draft
Requires further
coordination

	Section/ Clause:	Description:
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	Annex 1.1	Technical Definitions and Abbreviations
	Annex 1.2	Content of Bid Stage Safety Plan
	Annex 1.3	Additional Contractor Forms
	Annex 1.4	Figures and Illustrations
2. General Safety Measures	2.1	Work Environment
	2.2	Risk Control Around the Site
	2.3	Prohibition of Entry – Dangerous Work
	2.4	Spotters, Flagmen and the Like
	2.5	Fall Prevention
	2.6	Falling Objects
	2.7	Adverse Weather Requirements
	2.8	Fire Prevention
	2.9	PPE and First Aid
3. Existing Underground, Concealed and Overhead Services	3.1	Underground and Concealed Services
	3.2	Overhead Services
4. Contractor's Equipment	4.1	General Requirements Inspection, Maintenance and Repair
	4.2	Safety Requirements
	4.3	Alternative Use
	4.4	Hired/Leased Contractor's Equipment
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	5.2	Hoisting Operations
	5.3	Hoisting Equipment – Cranes
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	6.2	Earthwork Support
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	6.5	Scaffolding
	6.6	Elevated Access Structures
	6.7	Temporary Electrical Installations
	6.8	Electric and Gas Welding and Cutting
7. Excavation Works	7.1	General
	7.2	Particular Safety Measures
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	8.2	Particular Safety Measures
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		Particular Safety Measures for Insitu Concrete Work

	9.2	Reinforcement
	9.3	Formwork (including Falsework)
10. Diving Works	10.1	General
	10.2	Dive Safety Plan
	10.3	Personnel for Diving Operations
	10.4	Diving Equipment, Tools, Facilities and Workboats
	10.5	Particular Safety Measures
	10.6	Diving Accident Control Plan
11. Railway Works	11.1	<i>Excluded - to be included in JSSS Second Edition)</i>
12. Road Works	12.1	
13. Bridge Works	13.1	
14. Tunnelling Works	14.1	
15. Dam Works	15.1	
16. Demolition and Alteration Works	16.1	

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

1.1 Safety Declaration

1.1.1. Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.

1.1.2. A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.

NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance 1.3 and modify the 1.1.2 as follows:

1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Declaration.

This is specifically a Bid form to be submitted with the Bid and the wording is correct. Actually, this does not require a change to the JICA Standard Bidding Document as included in our earlier draft but JICA do not want to do this

I have modified the User Guide to state this but the same problem will arise, the User Guide requires the Executing Agency to change the Bidding Documents but the SBD prevent this.

If JICA do not change the SBD this will continue to be a problem and for now all else must therefore be an unsatisfactory compromise

NK: NK inquired JICA whether it is not problem to include the form of Safety Declaration in the User Guide because the SBD does not allow addition.

NK5/6YH: JICA did not response to the above inquiry. We will proceed as MD proposed.

1.2 General Reference Notes

1.2.1. For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].

1.2.2. The following further general reference notes apply to the content of JSSS:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
- (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an **equivalent alternative** diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.

(6) Unless otherwise stated in JSSS or the context is otherwise clear, (JC1) any reference in JSSS requiring the provision by the Contractor of health and safety measures for

Contractor's Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer's Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.(JC2)

NK: There are many descriptions of "other the Site areas (if any) where the Works are being executed" in JSSS. GC defines as 1.1.6.7 "Site" means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.(NK のコメントにより、すでに削除済ですが、Q&A は残しました。)

May we know the following?

Q1: Which places you are assuming as other places?

Q2: Are other places specified in the Particular Safety Specification?

Other places may be specified in the Contract as forming part of the Site such as offsite storage areas provided by the Employer or Employer's and Engineer's compounds and facilities all of which may be remote from the Site but for which the Contractor still has the usual obligations such as care, insurance, maintenance, etc.

This is obviously creating difficulty with interpretation, so I have deleted all such reference in JSSS and it now it constantly refers to the Site only. This will also be considered for mention in the User Guide

JC1: In this chapter 1, the expression "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site" which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better:

1. With this additional wording, simply say "the Contractor's Personnel" or

2. Without this additional wording, every time repeat "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works"

NK5/6YH: NK would like to select the 1 above for JSSS:

JC2: Safety measures are needed not only in the Site.

We would like to have advice of NK/MD. The current draft JSSS says:

A: the Site (very often) and

B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS L7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above.

Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:

"Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works"

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat "the Site and other places (if any) where the Contractor intends to execute the Works" every time. But this is too long, so a bit awkward.

How do you think?

NK5/6YH: NK would like to ask MD to review and select proper wording for JSSS:

(7) Any reference in JSSS to "relevant authority" or "relevant authorities" shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.

(8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract

Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

~~1.3.1. JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The “Project Safety Specification” shall have priority over the other parts of Specification in respect of health and safety matters. Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS, as illustrated in Annex 1.4: [Figures and Illustrations], Fig A1.4.1 [Incorporation of JSSS in Bid and Contract Documents] and as follows: (JC3)~~

~~1.3.2. JSSS shall be included as a part of the Specification for the Works, which shall be subdivided into two parts namely:~~

~~1.3.3. The Project Safety Specification (including JSSS), and~~

~~1.3.4. The Technical Specification~~

~~1.3.5. The priorities of the document comprising the Specification are as follows:~~

~~1.3.6. Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS,~~

~~1.3.7. 1.3.1. The “Project Safety Specification” shall have priority over the Technical Specification in respect of health and safety matters.~~

NK: Q1: We think it needs to explain/define “Technical Specification” as same as User Guide 1.3.2 (3) The “Technical Specification” shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safety.

~~Yes I agree but the problem again is that “Specification” is already defined in the General Conditions of Contract and any change should be therefore be through a Particular Conditions change but JICA do not want this.~~

~~I have added the explanation as above but please note that this is a compromise.~~

Q2: Is “other parts of” necessary?

~~Thank you and no, it isn't, see above. (Already deleted.)~~

JC3: Better to avoid using “Technical specification”

~~Fig A1.4.1 moved to User Guide.~~

NK5/6: No comment to JC because JICA want to modify as they commented.

~~1.3.8. 1.3.2. The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.~~

~~I recommend that the following is necessary (JC4)~~

~~The User Guide shall not form a part of the Contract.~~

NK: : MD proposed the addition above. NK considers it is not necessary.

JC4: Not necessary.

NK5/6: Deleted as commented.

1.4 Compliance with JSSS and Other Regulations

1.4.1. JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.

1.4.2. JSSS shall not limit the Contractor’s statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

1.4.3. The Contractor shall comply fully with the requirements of JSSS ~~Projectas supplemented and modified by the Particular~~ Safety Specification.

1.4.4. ~~Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer's Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.(JC5)~~

JC5: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.

NK5/6: Will modify as commented.

1.4.5. ~~Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply. (JC6)~~

NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?

It is intended to be for the situation where JSSS has been agreed to be use, but it is lacking in some areas in which case we use the Laws.

JC6: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6.

NK5/6: Will delete as commented.

1.4.6. ~~If, for the particular part of the Works, the Project Safety Specification does not contain safety requirements and there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable safety measures in the Safety Plansinternationally acceptable safety regulations for the Engineer's consent. These may contain proposing application of internationally recognised standard or regulation.~~

NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?

It is intended for use where we have dropped back to the Laws but there are no particular Laws available.

I have no objection if both are deleted.

NK: NK propose to combine 1.4.5 and 1.4.6 below.

If there are no or insufficient safety provisions in the Laws of the Country and in JSSS and the Particular Safety Specification for the particular part of the Works, and if the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent. (subject to MD's review.)

There is no JICA comment to the above.

1.4.7. Specified Standards and Regulations(JC7)

JC7: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.

NK5/6: YH think these regulations do not include the law. To MD, please review this comment and sentences.

(1) Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date. (JC8)

JC8: Better to add this in the main text of JSSS as mentioned in A.1.1.5 ?

NK5/6: YH think these regulations do not include the law. We would like to ask MD to review this.

(2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.

(2)(3) Application of detailed parts of standard or regulation specified in JSSS may be waived at a formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request. (JC9)

IC9: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of “waiver” should be provided.

NK5/6: Will modify as commented.

(3)(4) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.4.8. Where there is any reference to OSHA and unless otherwise evident from the text, the words “team leader”, “on-site supervisor”, “on-site supervision”, “field superintendent”, “work chief” and the like shall be collectively construed as reference to the appropriate member of the Contractor’s Personnel, any reference to the “safety and health manager of the Contractor” and the like shall be construed as reference to the HSO and “The construction plan and safety and health plan”, shall be construed as the “Safety Plan”.

1.4.9. If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:

- (1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.
- (2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear. (JC10)

IC10: We don't really understand the meaning of this

NK5/6: YH considers this cannot be understood. To MD, please review this sentence..

1.4.10. Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion *and Defect Notification Period.* ~~during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification.~~ (JC11)

NK: We consider that this phrase may be changed to “and the Defects Notification Period”? (Though the phrase is correctly expressed.)

No, your suggested change would not be correct this has been especially drafted following JICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).

The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer’s property except as stated in this clause.

NK: we agree to leave this as specified.

IC11: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.

With this modification, Particular Safety Specification in User Guide will not be necessary any more.

NK5/6: Will modify as commented.

1.4.11. The Contractor shall fully inform his personnel, his Subcontractor’s, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.

1.5 Contractor’s Safety Management System

1.5.1. The Contractor shall institute a health and safety management system in accordance with ~~OHSAS 18001 or~~ ISO 45001:2018. (JC11a) The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.

JC11a: OHSAS does not exist any more? Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.

NK5/6: OHSAS18001 will be expired on March 11, 2012. To MD, do we make note till the expiry date? NK agreed to delete the year.

1.5.2. ~~The Contractor shall state the applicable standard in the Contractor's Safety Plan.~~ (JC12)

JC12: If delete OHSAS above, delete accordingly.

NK5/6: To MD, please review this.

1.5.3. ~~The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.~~ Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17. (JC13)

JC13: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.

NK5/6: Will modify as commented.

1.5.4. The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.

NK: JICA deleted 1.5.3 in the last comment because JICA wants for the Contractor to institute and operate HS management system but not request submission of certification. (actually and practically certificate is not much important). We think 1.5.3 should be deleted.

I have deleted the requirement with the Bid (see Annex 1.3), however if the contractor is to comply with a scheme how does the Engineer know which scheme and how to verify compliance?

It has no little or no meaning otherwise.

NK: JICA intention is only to apply the safety management system excluding the certification and auditing by the certification body. Therefore, 1.5.3 is considered not request certification. To JICA, is this understanding correct? この考え方で正しいでしょうか？

1.6 Checking and Validation of Submissions

1.6.1. In accordance with GC 4.9 [*Quality Assurance*] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination (JC13a), design and supervision staff and any independent checkers as appropriate.

NK: Is this correct that we think 1.6.1 is added in relation with design of TW, etc.?

Not only TW it also applies to his Safety Plans, Method statements, any shop or working drawings. In fact any Contractor submissions are stated.

JC13a: coordinator?

NK5/6: We think so.

1.6.2. ~~For the purposes of interpretation for JSSS, the final paragraph of GC 1.8 [*Care and Supply of Documents*] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible.~~ (JC14)

NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.

This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. I believe that with the increased amount of submissions such as method statements, safety plans and temporary works details, there is an increased possibility that the Engineer could comment but chooses not to or even overlooks or misses, errors. If this happens there is the risk of avoiding responsibility if an error or defect (what is this?) should have been discovered. (JC14)

It is a strange but potentially onerous obligation that is inconsistent with GC 4.9 even if 1.8 does not state the consequences: GC 1.8 states: "If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect."

JC14: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1).

Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor.

We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".

NK5/6: Will modify as commented.

1.7 Contractor's Safety Plans

1.7.1. The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.

1.7.2. The Safety Plans shall set out or refer to all the health and safety requirements:

- (1) that are stated in JSSS;
- (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and
- (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site. (JC15)

JC15: See 1.2.2 (6).

NK5/6: No comment.

1.7.3. The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:

- (1) Bid Stage Safety Plan (Outline Overall Safety Plan).
- (2) Commencement Stage Safety Plan (Updated ~~Overall~~ Bid Stage Safety Plan)
- (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works

NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.

I don't quite understand your comment, the Bid Stage Plan is followed by an updated plan after Commencement but this is still an early plan and the same plan (or parts of it) will probably require to be further revised and updated as the detail of works develop and before any parts of the works commence.

NK: We understand your meaning.

1.7.4. The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level. ~~throughout the Time for Completion of the Works.~~

1.7.5. Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility. ~~and at any time throughout the Time for Completion of the Works.~~

NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?

Yes thank you, that is true, but better to delete the phrase rather than add.

1.7.6. Bid Stage Safety Plan:

- (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [*Content of Bid Stage Safety Plan*].
- (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

1.7.7. Commencement Stage Safety Plan

- (1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site,
- (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.
- (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.

NK: Is it not necessary to specify to review Commencement Stage SP?

Can we consider Commencement Stage SP is not be reviewed and the Engineer may review it and give comment in accordance with GC 1.8 Care and Supply of Documents though Japanese draft is specified to review it within 14 days?

Fair comment: I had modified the following clause 1.7.8 to deal with Particular Safety Plans. The Commencement Stage Safety plan is another contract stage submission subject to the same procedures so I have added it there.

Please also note the above correction to the submission date of the plan which should be twenty-eight (28) days after the Commencement Date.

1.7.8. Particular Safety Plans

- (1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.

1.7.9. Procedures for Submission and Review

- (1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works. (JC16)

JC16: Should it be "of the Works or any part thereof"?

NK5/6: We agreed the above modification.

- (2) The Contractor shall submit:
 - (a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [*Commencement Stage Safety Plan*].

- (b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.

NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?

I have changed this

Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP.

We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan

I disagree; many of the items mentioned in Issue 6 are to be included in the Method statement and all other items are included in Annex 1.3 all of which will be progressively developed. There is no need to include additional information here.

NK: understand.

- (3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:

- (c) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;
- (d) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and
- (e) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.

1.7.10. The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.

1.7.11. Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.

1.7.12. The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.

1.8 Risk Assessment

1.8.1. In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.

1.8.2. The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.

1.8.3. The procedural flow of risk assessment shall be as follows.

- (1) Identifying hazards.
- (2) Evaluating risks.

- (3) Determining measures of risk reduction or elimination.

1.8.4. The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:

- (1) Removal of hazards such as eliminating dangerous methods of construction.
- (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
- (3) Engineering measures.
- (4) Management measures including improving skills with additional training.
- (5) Use of PPE.

NK: May we know what “improved PPE” mean?

Deleted

1.9 Contractor’s Method Statements

1.9.1. The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.

1.9.2. Method Statements shall be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and (JC17) include details of all Permanent Works and Temporary Works with supporting documents such as:

JC17: Better to have a linkage with the risk assessment.

NK5/6: Will modify as commented.

- (1) Studies, investigations and designs.

NK: We suggest to change to “Studies, investigations, and designs”?

Changed

- (2) Structural calculations and any other calculations.
- (3) Specifications and technical details.
- (4) Proposed construction procedure, sequence and method.
- (5) Construction resources including superintendents, workers, operation leaders and Contractor’s Equipment.

NK: We consider “worker” will be used because it is used in other Chapter though FIDIC uses “labour”.

Ok I have changed anyway but it now needs wider wording, labour is also used in FIDIC

- (6) Inspection and monitoring plan.

1.9.3. The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.

1.9.4. Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer’s request.

Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:

- (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with

- the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.
- (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.
 - (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.
 - (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.
 - (5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.

NK: We consider “for his information” can be deleted because this phrase is not used for Safety Plan though Issue 6 used it.

Changed.

1.10 Engineer’s Safety Representative

- 1.10.1. ~~Unless otherwise specified in the Particular Safety Specification, the~~ The Engineer may delegate his power and authority to any of his assistant’s delegated representative at the Site who (JC18) shall act as the Engineer’s health and safety representative for the purpose of complying with any health and safety obligations under JSSS.

JC18: Particular Safety Specification is not necessary with this modification.

NK5/6: Will modify as commented.

- 1.10.2. The terms of the appointment shall be in accordance with GC 3.2 [*Delegation by the Engineer*].
- 1.10.3. Whenever the term “Engineer” is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.

1.11 Safety Compliance Instructions from the Engineer

- 1.11.1. Without affecting or diminishing the Contractor’s responsibility under GC 4.1 [*Contractor’s General Obligations*] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor’s performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.
- 1.11.2. If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [*Suspension of Work*] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer’s consent and implemented such measures to ensure that no further risk exists.
- 1.11.3. If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and

corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer's consent and implemented such measures to ensure that no such accident can reoccur. (JC19)

JC19: The sentence is not complete???

NK5/6: To Md, please review the sentence.

1.11.4. The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.12 Health and Safety Officer at the Site (HSO)

1.12.1. For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7 [Health and Safety], shall be construed as "Health and Safety Officer at the Site".

NK: HSO is defined in A1.1.1(3), so can 1.12.1 be deleted?

No: This is necessary to correspond to the definition

Please note that this is a compromise, PC change would have been preferable

1.12.2. Requirements for the HSO:

- (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.
- (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor's Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety].
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) ~~Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management. (JC20)~~

Where there is no legal requirement under the Laws of the Country **or unless otherwise specified in the Particular Safety Specification**, the HSO shall have appropriate academic, educational or vocational qualification such as that **International Diploma** issued by the National Examination Board in Occupational Safety and Health (NEBOSH) **in UK Level 6 Diploma level** or **Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) in USA** or an equivalent alternative internationally recognised qualification covering health and safety and risk management.

IC20: To NK, Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia)

NK5/6: We rechecked the qualification of HSO required in the world and tabulated below:

No	Country	Law/Regulation	Title	Requirements	Work Experience	
1	Japan	Ordinance on Industrial Safety and Health	Safety Officer	1. Trained personnel for 9 hrs training course, or	University or technical college science course other courses	in S&H 2 years 4 years
					Senior high school science course other courses	in S&H 4 years 6 years
					Others	in S&H 7 years
2. Industrial safety consultants.						
2	USA	OSHA APPENDIX C TO §1926.65 COMPLIANCE GUIDELINES I.Occupational S and H Program. U.S. Army Corps of Engineers, EM-385	e.g. Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) The Safety and Health Manager shall be the CSP.	CSP 1) Bachelor's degree, and 2) BCSP Qualified Credential (e.g. NEBOSH National or International Diploma in Occupational Health and Safety) 3) CSP examination	4 years of safety experience	
3	UK	Internet Information	Environmental Health and safety manager	1) Bachelor's degree in Safety Engineering, etc. 2) National/International Diploma 1. NEBOSH National Diploma in Occupational Health and Safety. 2. British Safety Council Level 6 Diploma in Occupational Safety and Health., etc.	5 years related experience in environmental health and safety.	
4	Singapore	Regulations	1)Representative of the Contractor 2)Safety Supervisor	1) Training and exam. of 3 days 2) Training of 10 hrs per week for 6 months (60 hrs)		
5	India	Regulation	1)Safety Officer 2)Safety Staff	1) Graduation of safety course more than 2 years in college 2) Training course		
6	Thailand	Regulation	1)Head Man Level 2)Technique Level 3)High Technique Level 4)Professional Level 5)Management Level	1) 12 hr training 2) Ditto 3) 180 hr training 4) Graduation of Occupational health bachelor course, or person trained & passed exam., or safety officer of 5 years experience and trained & passed exam. 5) 12 hr training		
7	Indonesia	Regulation	Occupational Health and safety Expert	10 days (90 hrs) training		
8	Vietnam	Regulation	Not found yet.			

NK: We found each country has its regulation regarding qualification of Safety Officer. Japanese one is almost same level as Head Man Level and Technique Level in Thailand.

In Japanese regulation, the Project Manger shall be a General Safety and Health Manager and supervise the Safety officer(s). Japanese contractors may not assign Japanese engineers directly as HSO though they have experience and knowledge of safety management in construction sites and also ability to manage safety in ODA projects. However, they have no academic certificates in Japan and also international training certificates. The Japanese contractors who work for ODA projects may employ safety specialist who having qualification required in the contract or make their engineers be certified by international organizations such as NEBOSH and BCSP. The contractor's engineers can get such certificates by on-line training course.

Japan, USA and UK give special importance to the S&H work experience, Singapore and Indonesia do to training of 60 to 90 hrs course, and Thailand do to any of bachelor, training or experience.

Actually, depending on scale and accident risk of construction project, the employer or contractor seem to determine requirements of HSO for example the following may be applied for large or complicated projects, NEBOSH International National Diploma (Level 6) in UK and CSP (Certified Safety Professionals) by BCSP in USA, for small projects, International General Certificate (A level) in UK and SMS (Safety Management Specialists) in USA.

NK: From the above, we propose to revise the (7) as above so that the qualification of HSO shall be 1) licensed or registered in the Country (legal requirement under the Laws of the Country), 2) specified in the Particular

Safety Specification, and 3) International Diploma issued by NEBOSH in UK or Certified Safety Professionals by BCSP in USA or an equivalent alternative.

(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country, and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.

NK: We considers NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot not find such person. Large contractors and European contractors may find them.

We propose to add (7) “unless otherwise specified in Particular Safety Specification” before “the HSO...”

I have split this clause for clarity

I suggest that NEBOSH is OK as it is because an equivalent alternative is acceptable (see use of this term in JSSS 1.4.7)

It is also subject to receiving the consent of the Engineer.

NK: We think “two (2) years experience outside the Country” is also too high requirement for the local contractors and also Japanese.

We propose to delete “this two years outside the Country” and specify requirement in Particular Safety Specification depending on the Works.

I suggest that it is better to state here as a basic standard. If JSSS cannot specify a general standard, the choice of Executing Agencies will vary greatly. I will draft a relevant clause for the User Guide but please note that I have reduced the experience requirements and deleted the international requirements.

1.12.3. Supporting Staff

NK-1: JICA commented and minutes recorded in January as follows:

7.1.1 (5) HSO's duties:

JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.

No this is not a correct understanding, the HSO duties and obligations are far wider which is why this clause is correct and necessary

Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?

Yes, he will be very busy which is why he must be qualified and experience and given the full support staff that he requires and why he must receive the support of other Contractor's Personnel particularly Operation Leaders, all as stated herein

MM: HSO should always be ultimately responsible as the leader really of the Contractor's safety team with support duties delegated as necessary to a number of personnel including Operation Leaders. This is described in Chapter 1.10.1 and has been discussed. No change is required.

NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:

3. Common requirements in JSSS

(4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の “The HSO shall inspect work area before starting work...”は、“The Contractor shall ...”へ変更する。

HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.

From this idea, the HSO in the sentence “The HSO shall inspect work area before starting work...” shall be replaced with “the Contractor”.

Please let me review the Excavation comments when I receive them, however this looks correct as he is responsible for inspecting the safety arrangements, even if another person does the inspection on his

behalf. It needs no change but the work will not always be directly inspected by him, he can and will delegate but he is singularly responsible and will sign it off.

NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).

We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor's Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.

Based on the above idea, we want to revise some sentences below.

- (1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.
- (2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.

NK: We propose to delete (2) from the idea of mentioned above NK-3. The supporting personnel shall be full time assignment. The Contractor shall establish system of daily check by the site staff or designated personnel for check by the Contractor and reporting by the site manager to the HSO.

I think that (2) is clear, correct and necessary. Please refer to the following clauses also. It can be full time assistants or other Contractor's Personnel also who shall check certain aspects and who shall also have other responsibilities given to them by the HSO.

- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) The HSO shall be expected to develop internal procedures whereby all supporting personnel, (JC21) shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.

JC21: It is understood "internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO...."

But how "and the details of any inspection, for" relates to other part of this sentence???

Non-natives would have difficulty to understand.

NK5/6: YH think the sentence can be separated as follows though no so much difficult to understand the sentence. (次のように分解できるのだと思います。それほど違和感はありませんが。)

- 1) the requirements for any inspection
- 2) the details of any inspection

To MD, we would like to review the sentence because of sentence seems too long.

- (6) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

1.12.4. Inspections

- (1) The HSO shall be responsible for ensuring:

- (a) That all working areas ~~of the Site (JC22)~~ are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;

JC22: The working areas are not always a part of the Site

NK5/6: No comment to JC because JICA want to modify as they commented.

- (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and
- (c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*].
- (2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.

1.13 HSO - Scope of Duties and Authority

NK: JICA added "and Authorities" in the last comment.

Now changed as above

1.13.1. The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.13.2. The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Work:
- (a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;
 - (d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;
 - (e) Temporarily stopping the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.11 [*Safety Compliance Instructions from the Engineer*];
 - (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
 - (g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;
 - (h) Appointment of further supporting personnel (refer to 1.12.3 [*Supporting Staff*]);
 - (i) Instructing and training **Operation Leaders** in the health and safety aspects of their work including requirements for inspection and **confirmation** of results to HSO;

NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above:

- (i) Instructing and training the person in charge of construction works and the Contractor's Equipment in the health and safety aspects of their work including requirements for inspection and reporting of results to HSO;

I disagree and do not feel that any change is necessary. The position and authority of the HSO for the health safety on the Works should not be compromised. Who he requires assistance from is really his choice and it is dependent upon many factors such as the contractor's organisation, who is available, the general experience, capability and skill level of workers. We or the Engineer should have no interest in who he delegates support to providing the HSO does his job properly

- (j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;
- (k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;
- (l) Planning and implementation of various training and education implementation plans;
- (m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;
- (n) Preparing regular internal and external reports on health and safety activities; and
- (o) Hazard prediction activity.

1.14 Procedure for Resuming the Works

1.14.1. If the Engineer has issued an instruction under JSSS 1.11 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [HSO - Scope of Duties and Authority] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.
- (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within ~~seven fourteen~~ (14) (JC23) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving ~~seven-three~~ (7) (JC24) days' notice in writing of the resumption date.

To be proactive, the Engineer may give consent at any stage within the above stated time scales.

JC23& 24: 14 days are too long, and 7 days are too long.

NK5/6: Will modify as commented.

- (5) The Contractor resumes the Works or part of the Works on the due date.

- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1. The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2. In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

NK: We think the 1.15 is same as Japanese draft, however, we feel it is not clear who take the following action.

Is there any good idea to express the H&S management shall be made by management personnel consisting of construction managers, Operation Leaders, HSO (for reference I added personnel in charge of the activities below.).

Please see above notes, I do not feel that the following is desirable or necessary.

For further understanding, the Contractor's Representative has similar in fact heavier responsibilities but we (nor FIDIC) consider defining which of his staff do what to support him. I do not recommend but we try to do it.

Overall Safety Management Activities:

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); ~~(by construction managers, Operation Leaders, HSO)~~
- (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and ~~(by construction managers, HSO)~~
- (c) Monitoring the implementation of the Safety Plan. ~~(by HSO)~~

Above is not recommended

(1) **Daily** Safety Management of Contractor's Personnel:

NK: We would like to add "Daily" before Safety in (2) to distinguish from (1).

No problem added already

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; ~~(by construction managers, HSO)~~
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures; ~~(by construction managers, Operation Leaders)~~
- (c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: ~~(by construction managers, Operation Leaders)~~
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
- (d) Instruction and management of safety education and training; ~~(by construction managers, HSO)~~
- (e) Instruction and management of all safety measures; and ~~(by construction managers, Operation Leaders, HSO)~~
- (f) Site Safety Inspections-~~(by construction managers, Operation Leaders, HSO)~~

None of above is recommended.

NK: We withdraw the addition.

NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.

No problem deleted already

1.16 Joint Site Safety Inspections

- 1.16.1. In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.
- 1.16.2. Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.16.3. Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.16.4. The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.
- 1.16.5. The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.17 Compliance Monitoring and Auditing

- 1.17.1. The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured. Such compliance shall be monitored efficiently and transparently at all times, for which purpose the Contractor shall:

NK: We propose to divide the above to two sentences because the above sentence is long and contains two subjects.

This is not quite correct but I have divided anyway

- (1) Create checklists for monitoring.
 - (2) Carry out regular and random inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents.
 - (4) Create storage and filing systems for the monitoring records.
 - (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer.
- 1.17.2. Safety inspections are intended to search for risks and hazards, which present a threat to safe working.
 - 1.17.3. The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:
 - (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
 - (2) Are the Safety Plan requirements being met?
 - (3) Is there documented proof of compliance?
 - (4) Is health and safety training effective?
 - (5) Is the Contractor's health and safety management system working effectively?
 - 1.17.4. The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.
 - 1.17.5. The audit team procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer.

~~1.17.5.1.17.6.~~ ~~Unless otherwise consented to by the Engineer,~~ The audit shall be headed by a senior member of the Contractor's head office health and safety team.

~~1.17.6.1.17.7.~~ If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.

~~1.17.7.1.17.8.~~ The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.

~~1.17.8.1.17.9.~~ The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.

~~1.17.9.1.17.10.~~ The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems.

The Audits shall not replace the regular health and safety inspections.

NK: We think the above sentence is better to be divided two sentences.

This is not quite correct but I have divided anyway

~~1.17.10.1.17.11.~~ The audits shall be conducted on a random basis at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.

~~1.17.11.1.17.12.~~ The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor. (JC25)

NK: JICA deleted in the last comment. We also consider the Engineer does not do auditing but inspection/supervise the Contractor's activities, and agree to delete this.

I do not really understand why it is deleted, as in any case the Engineer should be able to request/initiate an audit if he feels that the H and S system is not working properly.

NK: NK misunderstood this clause as the Engineer to do audit. We recommend now as follows;(time limit is given considering the preparation and trip time of the auditing team, and the safety management state cannot be improved in short time except such as cleaning the site, etc. If the Contractor takes actions for the auditing in short time, there is a merit for the Contractor to show example of required improvement.

The Engineer may at his option instruct the Contractor to execute a health and safety audit by giving proper preparation time for the auditing team between 3 days and 7 days.

JC25: It is not practical that the auditing team of the headquarters visit the Site within 3 to 7 days after the Engineer's instruction.

NK: 1.17.11(1.17.12) will be deleted.

~~1.17.12.1.17.13.~~ Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.

NK: JICA commented "Such "not to do" should not be included in the specification." and deleted this sentence in the last comment. We agree to delete this because the auditing team cannot come to the site from Headquarters located in other countries by short notice, and the ISO auditing is made by around one month notice or as scheduled.

No comment. to be deleted

~~1.17.13.1.17.14.~~ An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.

~~1.17.14.1.17.15.~~ The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.18 Proper Placement of Contractor's Personnel

- 1.18.1. To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.
- 1.18.2. In compliance with GC 6.9 [*Contractor's Personnel*], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.

Change not correct

- 1.18.3. ~~Labourer~~Workers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.
- 1.18.4. The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.
- 1.18.5. ~~The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement. (JC26)~~

JC26: Duplication with 1.18.2. Also, difficult to have a concrete image on what kind of records???

NK5/6: Will delete as commented.

- 1.18.6. The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.
- 1.18.7. Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:
- (1) Work content and work environment.
 - (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability.
 - (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
 - (4) Allocation of an achievable and safe work volume and time.
 - (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].
- 1.18.8. If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.
- 1.18.9. The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.
- 1.18.10. The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly

displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that **the HSO** resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.

NK: We think it is better to replace "he" with "the HSO" though he/she is nowadays used.

It is not necessary, please refer to JSSS 1.2.2 (8) and GC 1.2.(a). I have used "He" and "his" for example consistently and if it changes here it will require further change

1.19 Safety Training Generally

1.19.1. The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.

1.19.2. The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.

1.19.3. Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.

~~1.19.3.~~1.19.4. Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate). (JC27)

JC27: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.

NK5/6: Will modify as commented.

1.20 Safety Induction Training

1.20.1. Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom **he-the HSO** is responsible, including the Employer's Personnel and all other persons who are entitled to be on **the Site at** the request of the Employer or Engineer.

Ditto above

1.20.2. The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.

(5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (Refer to separate requirements for special training).

NK: May we know where we can find to refer to special training?

Rephrased

- (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.
- (7) Maintaining all working areas in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.
- (9) Firefighting; actions, precautions and control.
- (10) Health and safety rules.
- (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

1.20.3. Practical on-Site demonstrations shall be included.

1.20.4. Training Personnel (JC28)

JC28: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).

NK5/6: NK agreed to the above.

- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
- (2) All trainers shall be fluent in the language of the persons to be trained.
- (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.

1.20.5. Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.21 Skill Training

1.21.1. The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. *The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.* (JC29)

JC29: Not needed to say so in the specification.

NK: Will delete as commented.

1.21.2. The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available in the Country or not available

~~in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects., the Contractor shall:~~

~~(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or~~

~~(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.~~

~~Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, (JC30)all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.~~

JC30: May be the case in many projects, but skilled staff may be sometimes locally mobilized.

NK5/6: Will modify as commented.

This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion and Defect Notification Period.(JC31)

JC31: The Contractor also has to work during DNP and need skilled staff.

NK5/6: Will modify as commented.

Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply:. (JC32)

JC32: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences?

I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.

NK5/6: To MD, please review the comment and modify the sentences.

- (1) To compliment this OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to provide basic skill training to develop the ability of local counterpart trainee operation leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots.
- (2) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

Consent is better which is why I have used it. There will be a great tendency for the Contractor not to comply with these requirements properly and it needs to be enforceable somehow, otherwise safety (and quality and performance) will suffer.

"For information" really has no meaning.

If only "for information", Contractor can proceed even if the course syllabus and hours are clearly inadequate and would not otherwise be acceptable.

The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

Details Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.

NK: This request is specified in Annex 1.2 (24)(26) as Outline shall be submitted in Bid Stage SP.

This has been repeatedly discussed and explained.

If safety is to improve, this must happen from Bid stage onwards.

Every part of the Bid SP is Outline but some information is necessary on each subject listed in the Annex and should be submitted at Bid stage. If it is inadequate, only then can it be clarified and negotiated before the Contract is signed. After signing, is often too late.

NK: We agree to MD's opinion. However, the above sentence needs to be modified to such as "Updated details of such training mentioned in the Bid Stage Safety Plan shall be submitted."

~~1.21.2. Subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.~~

~~1.21.3. When the Contractor is satisfied that candidates have been successfully trained and qualified, and that they are able to act fully in accordance with the requirements of the Contract and subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries~~

NK: This sentence may be necessary to be reviewed.

Please review the above. Control is essential otherwise the working trainers will be demobilised too soon.

Please also note that this entire clause is my suggestion only, if JICA and/or NK do not want it, please advise and I will delete all such training as necessary.

~~1.21.4. It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice based upon capability in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.~~

~~1.21.5.~~ 1.21.3. Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

See above notes, it really should be "consent"

~~1.21.6.~~ 1.21.4. Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

1.22 Dangerous Work

1.22.1. Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.22.2. Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.22.3. The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [Permit System] that is to be worn conspicuously and be available for validation by the Engineer.

I have added the following because of apparent concerns over the meaning of JSSS 2.5.1.(3)

1.22.4. The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist (JC33) trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.

JC33: specially ?

NK5/6: To MD, Please check it.

1.22.5. A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.

1.22.6. The Contractor shall ~~select~~, train and equip ~~a specialist rescue team or~~ teams of selected workers at the Site for emergency rescue operation in accordance with JSSS 1.24.6 and 1.24.7. ~~who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue.~~ (JC34).

JC34: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.

NK5/6: Will modify as commented.

~~1.22.7. Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.~~ (JC35)

NK: Harness is basically used now and belts is not, so deletion of belt is made.

Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 2.

The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works.

JC35: Move to 1.24

NK5/6: Will modify as commented.

~~1.22.8.1.22.7. The requirement for rescue teams and rescue equipment shall be as specified in the Particular Safety Specification.~~

~~1.22.9.1.22.8. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.~~ (JC36).

JC36: ditto

NK5/6: Will modify as commented.

~~1.22.10.1.22.9.~~ The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.

~~1.22.11.1.22.10.~~ Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.

~~1.22.12.1.22.11.~~ For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [*Prohibition of Entry – Dangerous Work*].

~~1.22.13.1.22.12.~~ Hazardous Substances.

(1) If the Contractor during the execution of the Works, encounters and is required by the

Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists ~~Subcontractor(s)~~ (JC37) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.

JC37: not necessarily Subcontractors

NK5/6: Will modify as commented.

- (2) The Contractor shall ~~obtain the Engineer's consent for such specialist Subcontractors and their submit~~ detailed Safety Plans and Method Statements with respect to the removal and disposal of the Hazardous Substances shall also be submitted (JC38) to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].

JC38: modified accordingly

NK5/6: Will modify as commented.

1.23 Permit to Work System

1.23.1. The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.

1.23.2. The system shall be designed to control safety for Dangerous Work ~~all types of high risk work likely to be encountered, including for example:~~ (JC39)

JC39: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.

NK5/6: Will modify as commented.

~~1.23.3. Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3 Example of Dangerous Work.~~

~~There is no need to change this or give any examples, please refer to the definition of Dangerous Work in Annex I.1. If you insist, change to "for example" as in the following subclause.~~

- ~~(1) Work in elevated positions, for example, transmission towers ladders and scaffolding, roof or ceiling work.~~
- ~~(2) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.~~
- ~~(3) Diving Works.~~

NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.

~~I believe that this will vary according to the actual project scope and I recommend to leave as it is. It is better to be left to the discretion of the HSO.~~

1.23.4. The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.

1.23.5. Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.

1.23.6. The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

1.24.1. ~~Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or~~

~~are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.~~ (JC40)

JC40: Moved to 1.24.5.

NK5/6: Will modify as commented.

NK-1: JICA commented to modify and add “so specified in the Specification” to 1.20.2 in Issue 6.

NK consider that “as specified in Particular Safety Specification” between “the Works,” and “the Contractor” if we follow JICA’s comment.

NK-2: JICA commented that they want to use “as specified in Particular Safety Specification” more than “unless otherwise specified in Particular Safety Specification” because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSSS)

Can you specify as JICA’s request to use “as specified in PSSS?”

- 1) I do not recommend any use or reliance on “as specified in PSSS”. If something is then not so mentioned in PSSS, (even when it should be), this means that there is no requirement stated.
- 2) “Unless otherwise specified” followed by stated requirements is the preferred and better method as the stated requirements in JSSS are then a default and even if nothing further is stated in PSSS, there will always be these requirements to rely on. This is a “failsafe” in JSSS production.
- 3) More importantly, it must be understood that the availability of these facilities is a total Contractor responsibility under FIDIC (Clause 6.7), under which the Contractor must provide such facilities, whether specified further by the Employer or not and the PSSS must not compromise this.
- 4) The problem is that work in distant and remote places is a very common feature of JICA projects (such as hydro, water supply, power, irrigation etc.) and frequently proper health and safety facilities are just not made available by the Contractor at the Site at the expense of human life and safety. Often there are no local health authorities, or they are not equipped or not capable or they are too far away to be of any value. Very often contractors do not provide facilities to save money and health and safety suffers badly. This is fairly common practice and a common problem.
- 5) The changes are suggested as a means of improving this situation and they should therefore be viewed against this background.

NK-3: JICA want to clarify who “other persons who are entitled to be on the Site” are, and where “other places (if any) are.

“other persons who are entitled to be on the Site” is from FIDIC (Clause 4.8 and others) and for whom the Contractor has responsibility for care, protection and safety. This is all-embracing and extends beyond Contractor’s Personnel and Employer’s Personnel to allow anyone who has a legal entitlement to be there (e.g. other contractor’s, residents, others who have a right of way through the site, families of site staff if formally living there and others). I have stated this so that the extent of contractor’s compliance with JSSS is clear and so that it does not diverge from the contract. I do not recommend that it is changed.

“and any other places as may be specified in the Contract as forming part of the Site” comes from the definition of Site (GC 1.1.6.7) which I have already deleted throughout for clarity and for which will consider and may add an appropriate note in the User Guide.

1.24.2. The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.

1.24.3. ~~Unless otherwise specified in the Particular Safety Specification, m~~(JC41) Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, ~~to or for the use of any accompanying family members of~~ the Contractor’s Personnel, the Employer’s Personnel and the family members of all other persons who are entitled to be on the Site. (JC42) If so specified in the Particular Safety Specification, such medical services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.

NK: JICA want to clarify where “other places (if any) are.

~~Deleted see above~~

JC41: Free of charge for everyone” need not to be as default. I don’t believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!

If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.

JC42: See comment to 1.2.2 (6).

NK5/6: Will modify as commented.

NK5/6: YH inquired if the sentence of “the family members of all other persons” is necessary to be deleted.

1.24.4. The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.

1.24.5. ~~Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example include~~The Contractor shall provide the following medical and first aid facilities:

~~(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.~~

~~(2) First aid training, appointment of first aiders and dissemination of information.~~

~~(3) Type of communication facilities and measures for emergency response.~~

~~(4) Medical staff to be assigned at the Site.~~

~~(4) Medical Facilities on the Site together with description of equipment and consumables.~~ in

~~(5) Temporary water and power supply to maintain use during mains supply failure.~~

~~(6) Transportation facilities. Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.~~

~~(2)(7) Additional facilities specified in the Particular Safety Specification, if any.~~

~~Medical staff to be assigned at the Site.~~

~~(3) Emergency medivac services where necessary.~~(JC43)

NK: We feel that the provision of medivac services seems excessive unless health insurance can cover it.

~~I disagree if it means saving a life. Whether health insurance covers it or not is irrelevant. There will be situations where it is available and necessary to save life, so can JICA say that fatality is acceptable as the alternative was too expensive?~~

JC43: Where the Site is located in a large distance from a sufficiently equipped hospital.

NK5/6: Will modify as commented.

~~(4)(1) Medical Facilities on the Site together with description of equipment and consumables.~~ in

~~(5)(1) Temporary water and power supply to maintain use during mains supply failure.~~

~~(6)(1) Type of communication facilities and measures for emergency response.~~

~~(7)(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.~~

~~1.24.6. First aid training, appointment of first aiders and dissemination of information.~~

~~1.24.7.1.24.6. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor’s Personnel and Employer’s Personnel and all other persons who are entitled to be on the Site.~~(JC44)

JC44: See comment to 1.2.2 (6)

NK5/6: Will modify as commented.

~~1.24.8.1.24.7. Where the Works include the following for example, (1) The Contractor shall train selected Contractor's Personnel to perform emergency rescue operations in a safe manner in the event of any accident. Workers so trained :- (JC45) are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.~~

JC45: Merged with 1.22.6

NK5/6: Will modify as commented.

- (1) ~~Work on or near existing electrical equipment, cables, wiring, services and systems.~~
- (2) ~~Dangerous Work such as Confine Spaces, work at height.~~

NK: We consider describing example as above.

Please see above notes and Annex 1.1 Definitions. I do not agree that any such examples are necessary

~~(3)(1) Diving Work. (JC46)~~

JC46: Diving work is also Dangerous Work

NK5/6: We cannot understand how to this comment (JC46). To MD, please review this comment.

~~(4) Similar special circumstances.~~

~~1.24.9.1.24.8. Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC47)~~

JC47: Move from 1.22.

~~This should be "may" since the nature of Works may vary?~~

NK5/6: To MD, please review this comment.

~~1.24.10.1.24.9. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident (JC48)~~

JC48: Move from 1.22.

NK5/6: Will modify as commented.

~~1.24.11.1.24.10. All rescue team members Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].~~

~~1.24.12.1.24.11. Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].~~

NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.

~~Better to delete reference here "as recommended by OSHA" and include your clear requirements in JSSS 2.9 [PPE and First Aid] (JC49)~~

JC49: Agree.

NK5/6: Will modify as agreed.

1.25 Measures at the Time Accidents Occur

1.25.1. When an accident occurs, ~~the HSO~~ **the Contractor** shall immediately discontinue the concerned work, **inform the Engineer** and take all efforts to:

NK: JICA added in the last comment.

NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6. (JC50)

I disagree completely and do not recommend this (or any such) change. As I have explained repeatedly, the HSO must have this authority in order to fulfil his safety control functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible.

JC50: Agree.

NK5/6: Will modify as agreed.

- (1) Safely locate and extract casualties.
- (2) Provide first aid treatment at the Site.
- (3) Implement Secondary accident prevention activities, including:
 - (a) Preserving the accident site, make safe and prevent anyone interfering or entering;
 - (b) Discontinuing construction work related to or in the vicinity of the accident; and
 - (c) Implementing any further measures instructed by the Engineer.

1.25.2. Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident.
- (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The Accident Report shall include details of ~~the HSO's~~ the Contractor's recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [*Additional Contractor Forms*].

Please see above notes on this subject. This should remain as the HSO, I disagree and do not recommend this (or any such) change

1.25.3. For resumption of work procedures, refer to JSSS 1.14 [*Procedure for Resuming the Works*].

1.26 Emergency Response Plan

1.26.1. To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and as far as reasonably possible, shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.

The Contractor shall ~~the~~ take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have and to reasonably avoided, or overcome or lessened the effects to a reasonable extent. (JC51)

NK-1: Can we delete one of two "reasonably possible" above?

Yes, delete as above

NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).

With the changes to your draft that have now been agreed, I have already modified JSS 2.7 and I thought that the above can now be deleted as shown, however your later comments against 1.26.5 are confusing me greatly and I am unsure. Can you please answer my request against 1.26.5 first and I can then modify the above if necessary

JC51: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.

NK5/6: Will modify as commented.

1.26.2. The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground

surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

It is perfectly correct as it is however have split it. (JC52)

JC52: Thank you for being non-native friendly.

FIDIC 1999 and MDB version have been supported worldwide because of its “understandability”. Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

NK5/6: No comment.

- (1) The safety of Employer’s Personnel, Contractor’s Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.26.3. Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage and flooding arising from such flooding, earthquake or volcanic activity.

NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.

Yes this can be changed as above

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer’s Personnel, Contractor’s Personnel and all other persons entitled to be on the Site and (JC53) to any third parties and neighbours and property not connected with the Works but potentially affected thereby.

JC53: See 1.2.2 (6).

NK5/6: Will modify as commented.

- (2) Provision of temporary support to all sides and soffits of excavations or portal of portal of (JC54) tunnelling of sufficient strength, durability and suitability.

NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel.

My recommendation is still (as written) to leave it as it was and make this as wide a term as possible to increase the coverage. There is no acceptable definition of “portal” and this change just introduces argument on interpretation, why change?

NK: We accept to leave as it is

JC54: Better to add.

NK5/6: Will modify as commented.

- (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.26.4. Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [Contractor’s General Obligations] and JSSS 1.9 [Contractor’s Method Statements].

1.26.5. Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

~~This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract.~~(JC55)

NK: We consider that the Contractor may have difficulty to assume what activities can be made.

We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.

Which underlining? In 1.26.1?

Please see 1.26.6 for my assumption of your requirements

Your draft has never been clear to me and I am still having difficulty to understand what your draft means and what are your intentions and requirements.

Please note:

- 1) The Contractor can only plan for what he can reasonably foresee or anticipate and
- 2) It is necessary to state this so that no confusion is introduced with FIDIC GC 19.
- 3) This only leaves simple search and contact activities which has little or no meaning.

JSSS cannot specify what other measures the Contractor is to take after a Force majeure event (which I guess your emergency plan is trying to cover) as these events and any counter measures cannot be predicted.

Please can you clarify exactly what you are requiring the Contractor to do in the event of an earthquake, hurricane, typhoon or volcanic activity, so I can finalise this clause and also JSSS 2.7.

JC55: Better to jump to 1.26.6 without this.

NK5/6: Will modify as commented.

1.26.6. The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels.

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

1.26.7. The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.26.8. Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on **the Site**. (JC56)

JC56: See 1.2.2(6).

NK5/6: To Md, please review this comment.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.26.9. If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.26.10. The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.

1.26.11. For further measures and requirements refer to JSSS 2.7 [*Adverse Weather Requirements*].

1.27 Contractor's Safety Committee and Regular Safety Meetings

1.27.1. The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.27.2. Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of labour union, if any ~~Contractor's Personnel~~.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.27.3. The HSO shall be the chairman of the Safety Committee.

1.27.4. The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Hazards, safety and health problems identified by any members of the Safety Committee;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **occurred in the previous month and measures to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

Is this sort of comment really necessary? Yes it can be changed but this is only an abbreviated sample agenda.

- (d) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (e) Safety instructions received from the Engineer;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country;
- (h) Safety and health awards, media attention and the like; and
- (i) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
- (j) Other matters.

NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion.

Again, is this sort of comment really necessary? I have changed this

1.27.5. Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.28 Engineer's Regular Safety Meetings

1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **in the previous month** and measures **to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

Ditto above

Is the sequence here acceptable or shall it change as above?

- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Status of resolution of previous problems;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country; and
- (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.
- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.
- (5) The Engineer shall issue a formal instruction for any variation requests.

1.29 Project Safety Committee

1.29.1. On larger Projects with multiple contract packages and contractors and **unless otherwise stated** in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.29.2. Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.29.3. The Chairman of the Safety Committee **shall** be the Employer.

1.29.4. The Employer **shall** hold regular Project Safety Committee meetings, **on a monthly basis** unless otherwise agreed.

NK: JICA commented to delete this as holding meetings are **not monthly basis but optional**.

We propose "**periodically as requested by the Employer**" and ask you to reply to this comment as reply is not mentioned in the document with notes.

Please clarify what you want to be deleted

NK: Deletion is "on monthly basis".

1.29.5. The Employer **shall** prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

NK: JICA commented to replace "shall" with "may" in Clauses 1.29.3 to 1.29.5.

We want to ask you to reply to this comment as reply is not mentioned in the document with notes.

Please note that I have already edited the first paragraph to state "unless otherwise specified."

With this change I think that no other change is necessary

NK: MD 氏の回答をご参照願います。

1.30 Health and Safety Coordination with Other Contractors

NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer.

We propose to move them to the User Guide.

I disagree, this affects the Contractor also and it is important that it is stated here so that there is common and very clear legal agreement between Employer and Contractor on who does what

I think that this requires mention in both JSSS and the User Guide to avoid future dispute.

Please also note my understanding that the User Guide is not a part of the Contract and please let me know if you require differently.

NK: MD 氏の回答をご参照願います。

1.30.1. Refer to GC 2.3 [*Employer's Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer,
- (3) the personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] and GC 4.18 [*Protection of the Environment*].

The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.

When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.

1.30.2. The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.30.3. If any other contractors are employed by the Employer or if any legally constituted public authorities responsible to the Employer is working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: as and when considered necessary by Engineer.
- (2) Unless otherwise agreed, attendees shall include representatives of:
 - (a) The Employer;
 - (b) The Contractor;
 - (c) Other contractors employed by the Employer; and
 - (d) Personnel of any legally constituted public authorities.

NK: We considers it is easy to understand attendee by adding “who may be employed in the execution on or near the Site of any work not included in the Contract.” to (d) though it mentioned in the first sentence.

I don't understand your comment, please advise what change you require (本 Q&A は無視願います。)

- (3) Agenda should relate to coordination among different contractors including for example:
- (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;
 - (c) Accidents, injuries **in the previous period** and measures **to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

See previous note

- (d) Status of resolution of previous problems;
- (e) Items to be coordinated with police, fire department and other related organisations;
- (f) Compliance and registration requirements under the Laws of the Country;
- (g) Safety and health awards, media attention and the like; and
- (h) Other matters.

1.30.4. Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the ~~Engineer's~~ monthly progress report. (JC57)

JC57: **Engineer's monthly progress report is normally not shared with the Contractor. Delete "Engineer's" to mean Contractor's progress report.**

NK5/6: Will modify as commented..

1.31 Safety Statistics

1.31.1. The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.31.2. Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, ~~casualties,~~ location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.
- (7) Record of reports as may be required by government authorities.

- (8) Number of health and safety staff.
- (9) Number of Contractor's safety meetings and frequency.
- (10) Number of candidates given safety induction and other training.

NK: Are "candidates" replaced with "Contractor's Personnel"?

No, they are all candidates for training and can include others e.g. Employer's Personnel and others, etc.

- (11) Number of safety inspections,
- (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (13) Instructions issued for unsafe behaviour or unsafe site conditions.
- (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (15) Engineer's Instructions issued for work suspension.
- (16) HSO instructions issued for work stoppage. (JC58)
- (17) Others.

JC58: Statistics and Records are mixed.

1 to 3 and 5 relate to statistics.

4 and 6 to 16 relate to records.

It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32".

By doing this, things will be streamlined : "statistics → records → their reporting"

NK5/6: Will modify as commented.

- 1.31.3. All data shall be in a format and content given consent by the Engineer.
- 1.31.4. The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.
- 1.31.5. The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [*Safety Reports*].

1.32 Safety Reports

- 1.32.1. The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:
 - (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.

NK Is it necessary to add "for"?

Yes, it can be

- (2) Contractor/HSO and Joint Site Safety Inspections.(JC59)

JC59:Joint Site Safety Inspection Report ?

NK5/6: Will modify as commented.

- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [*Progress Reports*].

1.33 Health and Safety Records

- 1.33.1. The Contractor shall keep health and safety records for the following:

- (1) Accidents, fatalities, near-misses.
- (2) Inspection records and checklists.
- (3) Meetings for safety and health management.
- (4) Monitoring of safety and health management activities.
- (5) Health and safety education and training for the Contractor's Personnel.
- (6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
- (7) Work environment records and other records required by JSSS Chapter 2 [*General Safety Measures*] and other parts of JSSS.

1.33.2. All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.

1.33.3. A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [*Safety Reports*].

1.34 Health and Safety Incentive Schemes

1.34.1. The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.

NK: May we know if the word of "legitimate" (conforming to the law or to rules) is necessary?(対応済み)

We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.

Deleted see above

1.34.2. It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.

1.34.3. It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.

1.34.4. Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.

1.34.5. Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.

1.34.6. The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.

1.34.7. As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.

1.34.8. The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [*Safety Reports*].

1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE

1.35.1. Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

1.35.2. The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO (or his delegated and technically qualified assistant) (JC60) at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.

NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system.

We want to ask you to modify the 1.35.2 as the above.

As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 [Supporting Staff] where this is explained.

I do not recommend your suggested change

JC60: Agree with MD

NK5/6: Will modify as commented.

If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

1.35.3. The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.

If, as a result ~~of such examination, inspection, measurement or testing~~, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.35.4. As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

(1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works (JC61) of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.

JC61: Temporary Works is covered in (2).

NK5/6: Will modify as commented.

- (2) New or recent Contractor's Equipment and Temporary Works, ~~not more than five (5) years old upon the date that it is mobilised to the Site~~, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.

Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor ~~before shipment~~ ~~before delivering the Site (JC62)~~ ~~by an independent testing, inspection and certification agency~~ to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.

NK: We considers in actual basis as follows:

- Q1: Is Scaffoldings classified in (1) TW? If so, no need to discuss the inspection of Scaffoldings before shipment? Shall Scaffoldings be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?

Steel and system scaffolding etc. is considered as Contractor's Equipment but other types may be TW. This is also not covered by Chapter 4 of your draft.

I have defined this is 1.35.1 and as it is an important item for which there should be no future argument.

- Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffoldings, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.

Yes, see it includes all of these and yes much will be constructed or assembled at the Site but some major components (e.g. steel sheet piling, anchors, support systems and other components and materials) may be imported in which case this applies. Please refer also to definition in 1.35.1

Can we delete "and Temporary Works" in (2)?

I do not recommend it

- Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.

This is not my recollection although it was mentioned as examples and my explanation covered all types of Contractor's Equipment

We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies own old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too.

If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.

If you don't want pre-inspection at origin that is of course your choice. How to ascertain that it is compliant if there is no pre-inspection? It is too late when it arrives on site. I have given my suggestion and repeatedly explained this.

If JICA do not what this to apply, please let me have your instructions on what shall be changed and how.

We propose to delete the 2nd sentence above.

I do not agree for above reason but respect your wish. Just delete it

In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."

JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair or maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."

There is no reason why anything should be added here and do not suggest that this is added as it is unnecessary duplication

- Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old.

The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?

HCA are paying market bid rates for the best most productive and safest equipment, why should this be compromised? I have already given my explanations and recommendation, please let me have your instructions on what this shall be changed to or if it shall be deleted.

Many contractors will definitely not like this age imposition because it is regularly abused in the pursuit of profit.

JC62: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant?

NK5/6: Will modify as commented.

1.36 Health Matters

1.36.1. The Contractor is reminded of his obligations under GC 6.7 [*Health and Safety*] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.36.2. Healthcare services and facilities at the Site shall be made available free of charge, to or for the use of the Contractor's Personnel, the Employer's Personnel and all other persons who are entitled to be on the Site. *If so specified in the Particular Safety Specification, such healthcare services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.* (JC63)

JC63: Same comment as 1.24

NK5/6: Will modify as commented.

~~1.36.1.~~1.36.3. ~~Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.~~ (JC64)

JC64: See 1.2.2 (6).

NK5/6: Will modify as commented.

~~1.36.2.~~1.36.4. Occupational health care shall be provided by the Contractor and shall include ~~for~~ **example:**

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [*Working Environment*]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) Avoiding (JC65) Frequent or excessive manual handling of loads, stress and fatigue.

JC65: Better to add ???

NK5/6: Will modify as commented.

- (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability. (JC66)

JC66: Is this health care service?

NK5/6: Will modify as commented.

~~1.36.3.~~1.36.5. The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:

- (1) Health care staff to be assigned at the Site.
- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational **H**healthcare proposal.
- (6) Temporary water and power supply to maintain use during mains supply failure.
- (7) Type of communication facilities and measures for **emergency response**.

NK: May we know example of emergency response?

Please let me know what facilities you require and I will edit

NK: We will further consider it.

~~1.36.4. Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site.~~

1.36.6. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC67)

JC67: See 1.2.2 (6).

NK5/6: Will modify as commented.

~~1.36.5.~~ **1.36.7.** Report of Serious Illness

- (1) The Contractor shall inform the Engineer and submit details of any serious illness.

NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.?

It is up to you. Under GCC 6.7 The Contractor is required to maintain records and make reports concerning health matters to the Engineer as the Engineer may reasonably require. This is a further suggestion to try to reduce the volume and contents of report to be prepared

Please see (4) following, the above can be omitted if required.

- (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.
- (3) The report shall include details of the **HSO**'s recommended counter-measures.

NK: Is "HSO" replaced with Contractor as same as (2) above?

No, I do not recommend this. Please refer to the previous notes on this subject, the Contractor may send it but the Health and Safety Officer will prepare it

- (4) The Engineer is to be consulted on the types of illness for which reports are to be informed.

1.37 Design and Management of Temporary Works

1.37.1. Unless otherwise specified in the Particular Safety Specification, **the Contractor is** required to comply with the management standard with respect to design, erection, use and dismantling of

Temporary Works provided in Section 1 and Section 2 of BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework. (JC68)

Changed already

JC68: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.

NK5/6: Will modify as commented.

1.37.2. An alternative standard is acceptable by reference to JSSS 1.4.7 [*Specified Standards and Regulations*] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works ~~including Class A Falsework~~ (JC69).

NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specified specially referring to the following BS5975?

Section 1: General 1 Scope "This guidance is also applicable to the design of what is termed class A falsework 1) in BS EN 12812:2004, the design of which is for example specifically excluded from BS EN 12812:2004

Please also refer to BS 5975, Foreword, page VII, penultimate paragraph.

The European standard on falsework, BS EN 12812, exists in parallel with this British Standard. It specifies performance requirements for the design of falsework in accordance with one of three classes: A, B1 and B2. Limit state design methods are specified for design classes B1 and B2. It does not provide guidance for the structural design of Class A. It is recommended that Section 3 is used to provide guidance for Class A falsework.

It appears to follow that BS EN 12812 is not necessarily an acceptable alternative for example because Class A is excluded. I have assume therefore that it is necessary to state the need for Class A Falsework.

Please be aware that I have not reviewed or studied the BS in detail so please do not assume that I have. I do recommend that it is studied by JICA and NK to ascertain that it is applicable.

Previous clause 1.34.3 regarding alternatives is not now required as I have drafted and included JSSS 1.4.7 [*Specified Standards and Regulations*] to cover this generally.

Previous clause 1.34.6 has already been deleted.

There is no need for the suggested insertion into the following clause (previous Clause 1.34.7) as per Ito san's comment.

JC69: delete it?

NK5/6: Will delete as commented because the sentence is for the management of Temporary Works, so Class A Falsework; one of TWs, is not needed to be specially mentioned.

1.37.3. It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.

1.37.4. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.

1.37.5. The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.

~~1.37.6. Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].~~

JC: JICA commented as follows:

Issue 6 1.34.8 Too much to require the Contractor name all the specialist staff at the Bid stage. It is also excessive to require consent of the Engineer for those specialist staff.

“Necessary qualification” can be combined with 1.34.12 or 1.34.13.

Issue 6 1.34.9 If comply with JSSS1.9, all the specialist staff shall be appointed before the commencement, and subject to the Engineer’s consent.

NK: From this comment, the 1.37.12 below is enough requirement. 1.37.6 above specifies to refer to 1.12, which 1.12 is for HSO, it seems difficult to apply for personnel of TW.

As 1.3.12 specifies requirement and necessity of consent of the Engineer, we propose to delete 1.37.6.

I understand your comment and have no objection to the deletion of 1.37.6

1.37.7. Without affecting the Contractor’s responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor’s Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [Contractor’s Method Statements]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor’s design or methods.

The Engineer ~~may has no obligation under the Contract to~~ review Temporary Works design; ~~however he may choose to do so~~ for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 or any other acceptable standard in accordance with JSSS 1.37.2. ~~The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [Engineer’s Duties and Authority] Sub-Subclause (e) and issued without prejudice to the Contractor’s overriding responsibility for the safety and adequacy of the Temporary Works.~~

I have given further thought to the following clause which was originally considered as an exception. I am now of the opinion that offering such alternative to an Employer to state his requirements in the PSSS is not a good idea as it may result have a negative effect.

Most JICA funded projects are large projects and will have a Temporary Works content.

I suggest that the following alternative clause should be deleted to make these important requirements very clear.

If there is only a small and simple TW content, even if the BS 5975 is applied it will not cause any major harm or cost.

The sample specification provided some time back by JICA for the Hong Kong Project showed that all work shall comply with the BS. (JC70).

NK: MD 氏は上記の理由で次の 1.37.8 の条項は不要であると考え削除を提案しています。ご検討をお願いいたします。

JC70: Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

NK5/6: Will modify as commented.

~~1.37.8. Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:~~

- ~~(1) — Appointment of appropriately qualified and experienced staff.~~
- ~~(2) — Preparation of adequate Temporary Works designs.~~
- ~~(3) — Independent internal or external checking of the Temporary Works Design.~~
- ~~(4) — Preparation of a Temporary Works register and records~~

- (5) ~~Pre-erection inspection of all Temporary Works, including materials, components and equipment.~~
- (6) ~~Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to:~~
- (a) ~~Check that the Temporary Works have been erected in accordance with the design and issue by the HSO Contractor of a suitable sign showing it as complete and safe to use; and~~
- (b) ~~Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO Contractor of a suitable sign showing that it is ready for dismantling.~~

NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause,

we consider HSO will be replaced with Contractor as JICA commented:

Should it be HSO? When BS5975 applies. TWC/TWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?

The above applies when BS 5975 doesn't therefore I suggest (subject to JICA and NK agreement) that this can be deleted.

However, yes, the Temporary Works staff are all involved to make sure that the Temporary Works are designed and executed correctly, however the HSO is ultimately responsible for ALL safety on the Works and nothing should avoid his overview. I recommend that this should remain as HSO, I believe that it is a correct requirement which in practice should not be more than a counter signature.

1.37.9. In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.

NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?

I understand and agree with your comment. However, JSSS 1.18 gives rules for the proper placement of Contractor's Personnel and it probably better therefore to rephrase this as above.

The following clause can be deleted

~~1.37.10. For further information on Method Statements refer to JSSS 1.9 [Contractor's Method Statements].~~

1.37.11. For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].

1.37.12. Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties. ~~and shall obtain the consent of the Engineer.~~

NK: We think 1.3.12 is too long sentence to clearly understand requirement.

Yes I agree and have reworded this as above.

Q-1 Is consent by the Engineer given to specialist staff?

This part can be deleted.

Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?

We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.

I have reworded all, please refer to the above

1.38 **User Training(JC71)**

JC71: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.

NK5/6: Will delete as commented.

NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

I recommend that it be included here as a default requirement.

~~1.38.1. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.~~

~~1.38.2. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.~~

~~1.38.3. User Training shall vary according to the scope of the Works however it shall generally cover the following:~~

- ~~(1) Safe system and Plant use, operation and process control.~~
- ~~(2) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements~~
- ~~(3) Training in use of all hardware and software packages.~~
- ~~(4) Laboratory control (sampling and analysis) including operation of laboratory equipment.~~
- ~~(5) Recording and reporting.~~
- ~~(6) Emergency operation procedure.~~
- ~~(7) Maintenance management procedures.~~
- ~~(8) Inventory and store control systems.~~
- ~~(9) Particular safety procedures, including:
 - ~~(a) Safe working procedure;~~
 - ~~(b) Housekeeping of the facilities;~~
 - ~~(c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and~~
 - ~~(d) Safety measures for the Works and all items of Plant.~~~~

~~1.38.4. Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.~~

~~1.38.5. The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.~~

~~1.38.6. Other requirements for User Training~~

- ~~(1) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.~~
- ~~(2) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.~~

- ~~(3) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.~~
- ~~(4) The Engineer may choose to send representatives to witness the training.~~
- ~~(5) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.~~
- ~~(6) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.~~
- ~~(7) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty-six (56) days before any training commences.~~
- ~~(8) Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.~~
- ~~(9) The Contractor shall use visual media as much as possible throughout the training process.~~
- ~~(10) Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.~~
- ~~(11) The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.~~
- ~~(12) Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.~~
- ~~(13) The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.~~
- ~~(14) The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.~~
- ~~(15) Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.~~
- ~~(16) The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty-six (56) days.~~
- ~~(17) Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week days.~~
- ~~(18) Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not~~

~~sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.~~

~~(19) The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.~~

1.39 Unexploded Ordnance (UXO)

NK: we considers JICA may not specify 1.39 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

MD's reply: The Employer should inform the Contractor of the likely existence of UXO and if possible remove. The Contractor shall report any UXO then found to the Employer/Engineer for further instruction. This needs to be included in JSSS and the User Guide so that both parties are aware of the other's obligations. I have edited this to make the Employer responsible and have and separated accordingly.

NK: We have no comments to 1.39. xd v

For your further information, please note that this is an Employer's Risk under GC 17.3 (d)

The problem is, that GC 17.3 places no obligation upon the Employer (who should be more aware than anyone of the possible risk) to advise of the existence, to survey and remove such UXO before bidding or after if then encountered

This is the reason behind including this in JSSS

This clause may need some slight modification when I again work on the User Guide

- 1.39.1. If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.
- 1.39.2. Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.
- 1.39.3. Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.
- 1.39.4. Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.
- 1.39.5. Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy of the further clearance certificate together with any further instructions from the Engineer.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:

- (1) “**Executing Agency**” means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer.
- (2) “**GC**” and “**PC**” followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) “**Health and Safety Officer**” or “**HSO**” means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [*Health and Safety*] as construed in accordance with JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].
- (4) “**JICA Standard Safety Specification**” or “**JSSS**” means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works.
- (5) “**Method Statement**” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] and supplemented by JSSS 1.9 [*Contractor’s Method Statements*].
- (6) “**Operation Leader**” (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations and who can also be referred to within the OSHA definition as a “Competent Person”.
- (7) “**OSHA**” means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- (8) “**Particular Safety Specification**” means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project ~~as illustrated in Annex 1.4~~ [*Figures and Illustrations*].
- (9) “**Project Safety Specification**” means the document that contains Part 1 [JSSS] and Part 2 [*Particular Safety Specification*] ~~as illustrated in Annex 1.4~~ [*Figures and Illustrations*].
- (10) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (11) “**Safety Plan**” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the

entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor's General Obligations*] as supplemented by JSSS 1.7 [*Contractor's Safety Plans*].

(12) “**Safety**” shall also mean “occupational health and safety” and “health and safety”.

(13) “**User Guide**” means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.

NK: There is no “User Guide” specified in JSSS. Does it necessary to define it in JSSS?

I think as it will be published on line probably at the same time as JSSS, it does need definition and more importantly, it requires a clear statement in JSSS, that it is NOT a part of the Contract (see added clause JSSS 0.)

It is my understanding that the User Guide is for the reference of the Employer only and it is probably also a good idea therefore to describe it as “An Employer’s Guide” or something like that to make it very clear.

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

- (1) “**Accident Response**” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [*Accident Response Plan*].
- (2) “**Confined Spaces**” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Cofferdam**” means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.
- (4) “**Dangerous Goods**” means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (5) “**Dangerous Work**” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.
- (6) “**Diver**” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.

For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [*Diving Works*].

- (7) “**Earthwork Support**” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.
- (8) “**Elevated Access Structures**” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.

- (9) “**Emergency Response**” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.26 [*Emergency Response Plan*].
- (10) “**Falling Objects**” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.
- (11) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (12) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (13) “**Hazardous Substances**” means any substance, whether solid, liquid or gas, that may cause harm to health.
- (14) “**Hazardous Areas**” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as **Zone 0, Zone 1 or Zone 2, where:**
- (a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;
 - (b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and
 - (c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.

NK: May we know the source of Classification?

May we know if this Zones are specified in JSSS?

Classification of Zones is from the Technical Measures Document of HSE

<https://www.hse.gov.uk/comah/sragtech/techmeasareaclas.htm>

OSHA also have a classification which is more complicated.

Please be aware that in the absence of information in your draft, this is my suggestion but in every case and I rely on JICA and NK to check and confirm this. If you do not want to use this, please advise me and I will delete.

NK: 再考いたします。(現時点では JSSS では規定していません。)

- (15) “**Hoisting Operation**” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.
- For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [*Hoisting and Rigging*].
- (16) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.
- (17) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level.
- (18) “**Personal Fall Restraint System**” or “**PFRS**” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of

workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.

- (19) **“Personal Protective Equipment”** or **“PPE”** means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.
- (20) **“Safety Belt”** means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.
- (21) **“Safety Harness”** means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.
- (22) **“Scaffold”** or **“Scaffolding”** means a temporary structure or structures that provide access on or from which persons work or to support Goods.
- (23) **“Skill Training”** means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (24) **“Spotter”** means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*].
- Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.
- (25) **“Trade Effluent”** means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.
- (26) **“Unexploded Ordnance”** or **“UXO”** shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.
- (27) ~~“User Training” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.~~
- (28) **“Working Platform”** means a platform on or within a scaffold that is intended and designed to support persons or Goods.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

AED	Automatic External Defibrillator
BMGV	Biological Monitoring Guidance Values
CPR	Cardiopulmonary Resuscitation
ODA	Official Development Aid
OJT	On Job Training

PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings
TWA	Time Weighted Average
WEL	Workplace Exposure Limits

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ACI	American Concrete Institute
ANSI	American National Standards Institute.
ASHTO	American Association of State of Highway Transportation Officials
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials.
BS	British Standard.
BS EN	British Standard European Norm.
HSE	UK Health and Safety Executive.
ISO	International Organisation for Standardisation.
ILO	International Labor Organization.
JIS	Japanese Industrial Standards.

A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.

Annex 1.2: Content of Bid Stage Safety Plan

~~A1.2.1 This Annex lists the required content for the Bid Stage Safety Plan which is to be provided in accordance with “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA). The Safety plan is to be included in the Bidding Documents Part 1—Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF 39.~~

NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?

I think both are useful as the contractor should also be aware of requirements.

It is very important that the Employer/Consultant are prevented from altering the detail of this Annex in their Bidding Documents in any way, as all items are required in the Bid Stage Plan, all are coordinated with JSSS, the same structure, terminology and numbering must be used.

I suggest that this will be reworded something like the following, which I will do when go back to work on the User Guide further.

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor’s Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder’s intentions, so that this can be understood and properly evaluated. (JC72)

JC72: Please add “outline (or policy?) of risk assessment” as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11) “**Safety Plan**” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods.....

NK5/6: To MD, we would like to ask you to add as commented.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder’s corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder’s head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder’s Personnel

A description of the health and safety management organisation at Site headed by the Bidder’s Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor’s Personnel involved in health and safety management at the Site.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Bidder's Safety Management System (JC73)

Refer to JSSS 1.5 [*Contractor's Safety Management System*]

~~Confirm-Describe how which scheme~~ the Bidder institutes the Safety Management Systemis accredited under.

JC73: Modified in accordance with modification to JSSS1.5

NK5/6: Will modify as commented.

(6) Temporary Works

Refer to JSSS 1.37 [*Design and Management of Temporary Works*].

A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.

NK: JICA added "outline" in the last comment.

OK I have amended

(7) Temporary Facilities on Site

The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)

NK: We consider that the above sentence is independent clause from (6) above and locate in some place.

I have edited as above

(8) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.

(9) Safety Plan for the Works

NK: May the title be Works?

I have edited as above

A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.

(10) Safety Plan for Dangerous Work.

Refer to JSSS 1.22 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [*Definitions and Abbreviations*] and GC 4.1 [*Contractor's General Obligations*].

(11) Permit to Work System

Refer to JSSS 1.23 [*Permit to Work System*]

A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.

(12) Safety Measures for Contractor's Equipment

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(13) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.34 [*Health and Safety Incentive Schemes*]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.

(14) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(16) Site Inspection Plan

A description of the methods for Site inspections by the HSO, types of inspection and frequency.

The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work

(17) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.

(18) Policy for Preventing Traffic Accidents

A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.

(19) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(20) Accident Response Plan

Refer to JSSS 1.23.1 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.

~~It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.~~

NK: We consider that the above sentence is independent clause from (19) above and locate in some place.

Deletion is OK

(21) Health Care Plan

Refer to JSSS 1.36 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(22) Fire Response Plan

Refer to JSSS 2.8 [*Fire Prevention*]

Details of the fire prevention services to be provided at the Site.

The Fire Response Plan required by JSSS 2.8 [*Fire Prevention*].

(23) Emergency Response Plan

Refer to JSSS 1.26 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(24) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [*Contractor's Safety Management Activities*]).

(25) Safety Induction Training

Refer to JSSS 1.20 [*Safety Induction Training*]

An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(26) Skill Training

Refer to JSSS 1.21 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.

~~(27) User Training~~

~~Refer to JSSS 1.38 [*User Training*]~~

~~An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.~~

~~(28)~~(27) Legal requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.

Annex to the

Annex 1.3: Additional Contractor Forms

Attached Forms:

Form JSSS/BSD - Bidder's Safety Declaration

Form JSSS/SAR - Sample Accident Report

loc

Form JSSS/BSD - Bidder's Safety Declaration

[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]

I, *[insert name and position of authorised signatory]*, being duly authorised by *[insert name of Bidder/members of joint venture ("JV")]* (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.

The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.

The Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export (JC74) in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

IC74: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standard?

NK5/6: To MD, we would like to ask you to modify as commented.

The Bidder declares that he will mobilise for use upon the Works:

1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.

Please refer to my recommendations and notes in 1.35 and advise me of your requirements

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability.
3. Fully inform workers about hazards;
4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand.
5. Keep accurate records of work-related injuries and illnesses.

6. Perform tests in the workplace, such as air sampling as required by the Project Safety Specification.
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.
9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract.
10. Post injury and illness information and data where workers can see them.
11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site*)

Or

Bidder's Head Office Health and Safety Manager*)

Name:

Date: _____

(*Delete as applicable)

Form JSSS/SAR – Sample Accident Report

[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality) (If casualty(ies) is(are) belonging to subcontractor,) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	
8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	

(above to be inserted before all reports)

FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location of accident occurrence:	
4) Brief background and apparent cause:	
5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
6) Physical damages to the Works, Site and any properties of the third parties	
7) Present medical status of casualty(ies):	
8) Present work status:	
9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
10) Accident Report Submission Date	

Annex 1.4: Figures and Illustrations (JC75)

JC75: Delete if nothing else other than Fig A 1.4.1

NK5/6: Will delete as commented.

Attached Documents:

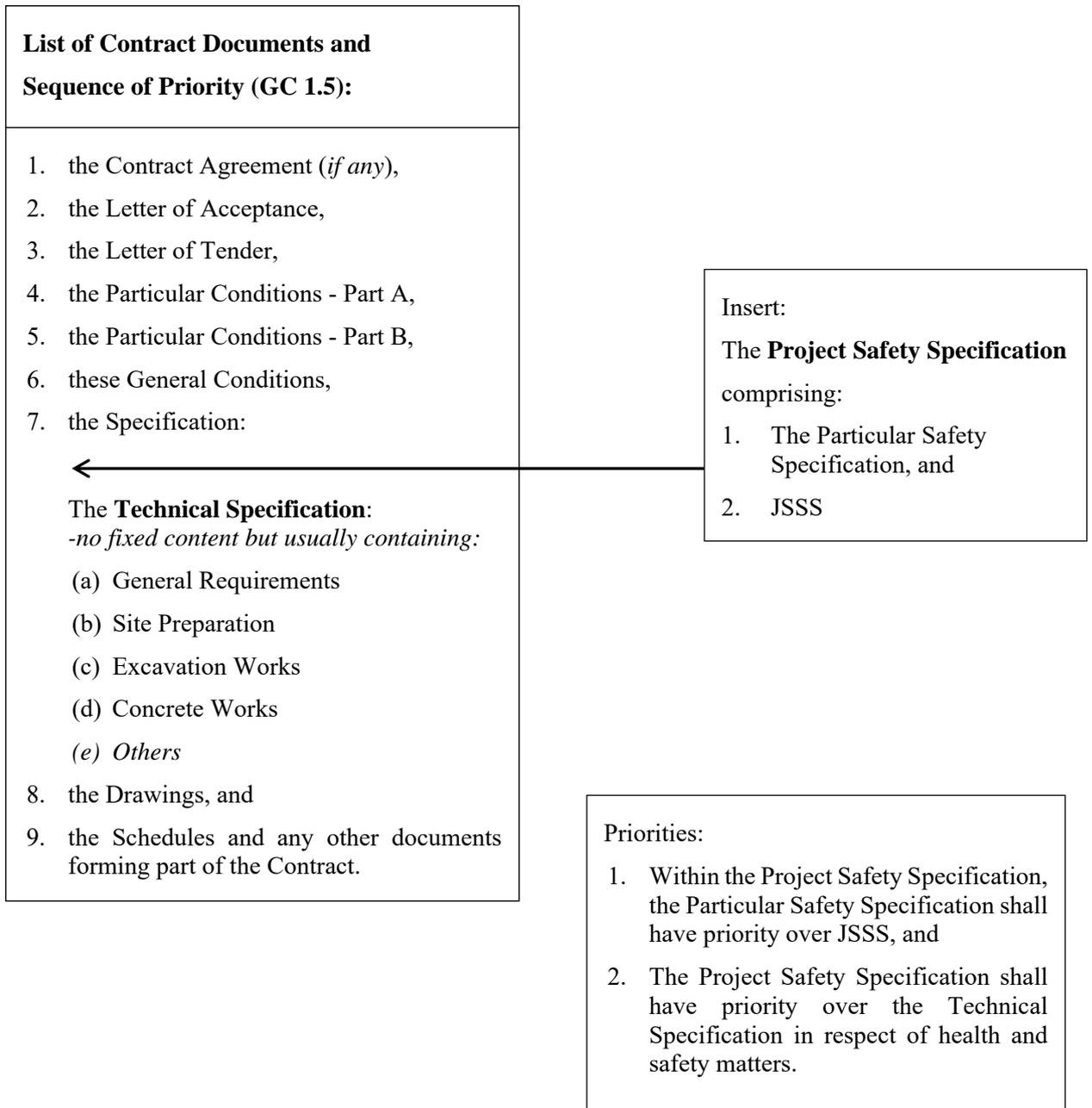
~~Fig A1.4.1 — Incorporation of JSSS in Bid and Contract Documents (JC76)~~

JC76: Move to User Guide 1.3.2

NK5/6: Will move as commented.

Fig. A1.4.1

Incorporation of JSSS in Bid and Contract Documents



NK Comment to JICA Comments(20200506)

JICA Comment and Revision (20200423)

Yellow marking and red letters : Comments by NK (20200319) & (20200327)

Green – subsequent changes made by DCI, Replied to NK inquiry and added DCI notes (20200325)

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE ODA



**Japan International Cooperation Agency
(JICA)**

_____, 2020

Prepared: DCI for NK
Issue: 7 (updated)
Revision:
Date: 25/03/2020

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Yellow marking and red letters : Comments by NK (20200319) & (20200327)

Green – subsequent changes made by DCI, *Replied to NK inquiry and added DCI notes* (20200325)

Copy of Mail from Mr. Ito, JICA on 2020/4/23

Dear Sakoda-san,

Very sorry for this late reply with respect to Chapter 1 and User guide.

Regarding Chapter 1, we have sometimes modified directly the text, and sometimes put comments.

After several times of exchange between us, please be informed of the followings:

- 1) As for the modifications of text with a comment highlighted in light blue, you don't have to examine the contents any more. You are requested only to check the quality of language.
- 2) As for the modifications of text without any comment, same. You are requested only to check the quality of language.
- 3) The modifications of text with a comment highlighted in green are sometimes questions and sometimes requests for advice. So, would you please come up with an appropriate solution?

As for the User Guide, our comments are still preliminary since the draft was still preliminary one.

We have, nevertheless, worked in the same manner as mentioned above as long as practicable.

Thank you for your consideration,

ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:

- 1) Japanese Acts, Orders and Ordinances including:
 - Industrial Safety and Health Act
 - Order for Enforcement of Industrial Safety and Health Act
 - Ordinance on Industrial Safety and Health
 - Safety Ordinance for Cranes
 - Ordinance on Safety and Health of Work under High Pressure
 - Ordinance on Prevention of Anoxia, etc.
 - Ordinance on Prevention of Hazards Due to Dust
 - Explosives Control Act
 - Order for Enforcement of Explosives Control Act
 - Ordinance on Explosives Control
- 2) OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- 3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.
- 4) **The International Red Cross and Red Crescent Movement (IRCRCM)**
NK: In 2.9.2 First aid kit: ANSI Z308.1 is referred to. Is the above 4) necessary?
True: ANSI is the kit but first aid courses will also be necessary (see added clauses in Section 2.9 and Chapter 10 also). IRCRCM seems to be a convenient and internationally applicable basis.
- 5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)

Suggestion for JICA:

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JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

Draft
Requires further
coordination

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	Annex 1.1	Technical Definitions and Abbreviations
	Annex 1.2	Content of Bid Stage Safety Plan
	Annex 1.3	Additional Contractor Forms
	Annex 1.4	Figures and Illustrations
2. General Safety Measures	2.1	Work Environment
	2.2	Risk Control Around the Site
	2.3	Prohibition of Entry – Dangerous Work
	2.4	Spotters, Flagmen and the Like
	2.5	Fall Prevention
	2.6	Falling Objects
	2.7	Adverse Weather Requirements
	2.8	Fire Prevention
	2.9	PPE and First Aid
3. Existing Underground, Concealed and Overhead Services	3.1	Underground and Concealed Services
	3.2	Overhead Services
4. Contractor's Equipment	4.1	General Requirements
		Inspection, Maintenance and Repair
	4.2	Safety Requirements
	4.3	Alternative Use
	4.4	Hired/Leased Contractor's Equipment
5. Hoisting and Rigging	5.1	General Requirements
	5.2	Hoisting Operations
	5.3	Hoisting Equipment – Cranes
	5.4	Rigging Equipment
6. Temporary Works	6.1	General Requirements
	6.2	Earthwork Support
	6.3	Coffer Dams
	6.4	Walkways, Ladders and Stepladders
	6.5	Scaffolding
	6.6	Elevated Access Structures
	6.7	Temporary Electrical Installations
	6.8	Electric and Gas Welding and Cutting
7. Excavation Works	7.1	General
	7.2	Particular Safety Measures
	7.3	Manual Excavation
	7.4	Excavation by Blasting
8. Foundation Piling Works	8.1	General
	8.2	Particular Safety Measures
9. Concrete Works	9.1	General
		Particular Safety Measures for Insitu Concrete Work

	9.2	Reinforcement
	9.3	Formwork (including Falsework)
10. Diving Works	10.1	General
	10.2	Dive Safety Plan
	10.3	Personnel for Diving Operations
	10.4	Diving Equipment, Tools, Facilities and Workboats
	10.5	Particular Safety Measures
	10.6	Diving Accident Control Plan
11. Railway Works	11.1	} <i>Excluded - to be included in JSSS Second Edition)</i>
12. Road Works	12.1	
13. Bridge Works	13.1	
14. Tunnelling Works	14.1	
15. Dam Works	15.1	
16. Demolition and Alteration Works	16.1	

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

**JICA STANDARD SAFETY SPECIFICATION (JSSS)
CHAPTER 1: GENERAL REQUIREMENTS**

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

1.1 Safety Declaration

1.1.1. Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.

1.1.2. A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.

NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance1.3 and modify the 1.1.2 as follows:

1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Deflation.

This is specifically a Bid form to be submitted with the Bid and the wording is correct. Actually, this does require a change to the JICA Standard Bidding Document as included in our earlier draft but JICA do not want to do this.

have modified the User Guide to state this but the same problem will arise, the User Guide requires the Executing Agency to change the Bidding Documents but the SBD prevent this.

If JICA do not change the SBD this will continue to be a problem and for now all else must therefore be an unsatisfactory compromise.

NK: NK inquired JICA whether it is not problem to include the form of Safety Declaration in the User Guide because the SBD does not allow addition.

NK5/6YH: JICA did not response to the above inquiry. We will proceed as MD proposed.

1.2 General Reference Notes

1.2.1. For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].

1.2.2. The following further general reference notes apply to the content of JSSS:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
- (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an **equivalent alternative** diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.

(6) Unless otherwise stated in JSSS or the context is otherwise clear, (JC1) aAny reference in JSSS requiring the provision by the Contractor of health and safety measures for

コメントの追加 [伊藤1]: In this chapter 1, the expression “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site” which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better:

1. With this additional wording, simply say “the Contractor’s Personnel” or
2. Without this additional wording, every time repeat “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works”

Contractor's Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer's Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.(JC2)

NK: There are many descriptions of "other the Site areas (if any) where the Works are being executed" in JSSS. GC defines as 1.1.6.7 "Site" means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.(NKのコメントにより、すでに削除済ですが、Q&Aは残しました。)

May we know the following?

Q1: Which places you are assuming as other places?

Q2: Are other places specified in the Particular Safety Specification?

Other places may be specified in the Contract as forming part of the Site such as offsite storage areas provided by the Employer or Employer's and Engineer's compounds and facilities all of which may be remote from the Site but for which the Contractor still has the usual obligations such as care, insurance, maintenance, etc.

This is obviously creating difficulty with interpretation, so I have deleted all such reference in JSSS and it now constantly refers to the Site only. This will also be considered for mention in the User Guide

JC1: In this chapter 1, the expression "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site" which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better.

1. With this additional wording, simply say "the Contractor's Personnel" or

2. Without this additional wording, every time repeat "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works."

NK5/6YH: NK would like to select the 1 above for JSSS:

JC2: Safety measures are needed not only in the Site.

We would like to have advice of NK/MD. The current draft JSSS says:

A: the Site (very often) and

B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above.

Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:

"Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works."

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat "the Site and other places (if any) where the Contractor intends to execute the Works" every time. But this is too long, so a bit awkward.

How do you think?

NK5/6YH: NK would like to ask MD to review and select proper wording for JSSS:

(7) Any reference in JSSS to "relevant authority" or "relevant authorities" shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.

(8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract

コメントの追加 [岡本2]: Safety measures are needed not only in the Site.

We would like to have advice of NK/MD. The current draft JSSS says:

A: the Site (very often) and

B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above.

Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:

"Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works."

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat "the Site and other places (if any) where the Contractor intends to execute the Works" every time. But this is too long, so a bit awkward.

How do you think?

Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

~~1.3.1. JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The "Project Safety Specification" shall have priority over the other parts of Specification in respect of health and safety matters. Within the "Project Safety Specification" the Particular Safety Specification shall have priority over JSSS, as illustrated in Annex 1.4: [Figures and Illustrations], Fig A1.4.1 [Incorporation of JSSS in Bid and Contract Documents] and as follows: (JC3)~~

~~1.3.2. JSSS shall be included as a part of the Specification for the Works, which shall be subdivided into two parts namely:~~

~~1.3.3. The Project Safety Specification (including JSSS), and~~

~~1.3.4. The Technical Specification~~

1.3.5. The priorities of the document comprising the Specification are as follows:

1.3.6. Within the "Project Safety Specification" the Particular Safety Specification shall have priority over JSSS;

~~1.3.7.1.3.1. The "Project Safety Specification" shall have priority over the Technical Specification in respect of health and safety matters.~~

NK: Q1: We think it needs to explain/define "Technical Specification" as same as User Guide 1.3.2 (3) The "Technical Specification" shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safety.

~~Yes I agree but the problem again is that "Specification" is already defined in the General Conditions of Contract and any change should be therefore be through a Particular Conditions change but JICA do not want this.~~

~~I have added the explanation as above but please note that this is a compromise.~~

Q2: Is "other parts of" necessary?

~~Thank you and no, it has been above. (Already deleted.)~~

JC3: Better to avoid using "Technical specification"

Fig A1.4.1 moved to User Guide

NK5/6: No comment to JC because JICA want to modify as they commented.

~~1.3.8.1.3.2. The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.~~

~~I recommend that the following is necessary (JC4)~~

~~The User Guide shall not form a part of the Contract.~~

NK: : MD proposed the addition above. NK considers it is not necessary.

JC4: Not necessary.

NK5/6: Deleted as commented.

1.4 Compliance with JSSS and Other Regulations

1.4.1. JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.

1.4.2. JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

1.4.3. The Contractor shall comply fully with the requirements of JSSS ~~Projectas supplemented and modified by the Particular~~ Safety Specification.

コメントの追加 [岡本3]:

Better to avoid using "Technical specification"

Fig A1.4.1 moved to User Guide.

コメントの追加 [伊藤4]: Not necessary

1.4.4. ~~Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer's Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.~~(JC5)

JC5: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.

NK5/6: Will modify as commented.

1.4.5. ~~Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply.~~(JC6)

NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?

It is intended to be for the situation where JSSS has been agreed to be use, but it is lacking in some areas in which case we use the Laws.

JC6: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6.

NK5/6: Will delete as commented.

1.4.6. ~~If, for the particular part of the Works, the Project Safety Specification does not contain safety requirements and there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable safety measures in the Safety Plans internationally acceptable safety regulations for the Engineer's consent. These may contain proposing application of internationally recognised standard or regulation.~~

NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?

It is intended for use where we have dropped back to the Laws but there are no particular Laws available.

I have no objection if both are deleted.

NK: NK propose to combine 1.4.5 and 1.4.6 below.

If there are no or insufficient safety provisions in the Laws of the Country and in JSSS and the Particular Safety Specification for the particular part of the Works, and if the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent. (subject to MD's review.)

There is no JICA comment to the above.

1.4.7. Specified Standards and Regulations(JC7)

JC7: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.

NK5/6: YH think these regulations do not include the law. To MD, please review this comment and sentences.

- (1) Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date.(JC8)

JC8: Better to add this in the main text of JSSS as mentioned in A1.1.5

NK5/6: YH think these regulations do not include the law. We would like to ask MD to review this.

- (2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.

- (2)(3) Application of detailed parts of standard or regulation specified in JSSS may be waived at a formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.(JC9)

コメントの追加 [岡本5]: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.

コメントの追加 [岡本6]: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6

コメントの追加 [伊藤7]: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.

コメントの追加 [J8]: Better to add this in the main text of JSSS as mentioned in A1.1.5

コメントの追加 [伊藤9]: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of "waiver" should be provided.

IC9: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of “waiver” should be provided.

NK5/6: Will modify as commented.

(3)(4) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.4.8. Where there is any reference to OSHA and unless otherwise evident from the text, the words “team leader”, “on-site supervisor”, “on-site supervision”, “field superintendent”, “work chief” and the like shall be collectively construed as reference to the appropriate member of the Contractor’s Personnel, any reference to the “safety and health manager of the Contractor” and the like shall be construed as reference to the HSO and “The construction plan and safety and health plan”, shall be construed as the “Safety Plan”.

1.4.9. If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:

- (1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.
- (2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear. (JC10)

IC10: We don't really understand the meaning of this.

NK5/6: YH considers this cannot be understood. To MD, please review this sentence..

1.4.10. Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion and Defect Notification Period. ~~— during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification.~~ (JC11)

NK: We consider that this phrase may be changed to “and the Defects Notification Period”? (Though the phrase is correctly expressed.)

No, your suggested change would not be correct this has been especially drafted following JICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).

The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer’s property except as stated in this clause.

NK: we agree to leave this as specified.

IC11: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.

With this modification, Particular Safety Specification in User Guide will not be necessary any more.

NK5/6: Will modify as commented.

1.4.11. The Contractor shall fully inform his personnel, his Subcontractor’s, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.

1.5 Contractor’s Safety Management System

コメントの追加 [岡本10]: We don't really understand the meaning of this. ????

コメントの追加 [伊藤11]: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.

With this modification, Particular Safety Specification in User Guide will not be necessary any more.

1.5.1. The Contractor shall institute a health and safety management system in accordance with ~~OHSAS 18001 or ISO 45001:2018~~ (JC11a) The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.

JC11a: OHSAS does not exist any more? Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.

NK5/6: OHSAS18001 will be expired on March 11, 2012. To MD, do we make note till the expiry date? NK agreed to delete the year.

1.5.2. ~~The Contractor shall state the applicable standard in the Contractor's Safety Plan.~~ (JC12)

JC12: If delete OHSAS above, delete accordingly.

NK5/6: To MD, please review this.

1.5.3. ~~The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation. Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17.~~ (JC13)

JC13: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.

NK5/6: Will modify as commented.

1.5.4. The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.

NK: JICA deleted 1.5.3 in the last comment because JICA wants for the Contractor to institute and operate HS management system but not request submission of certification. (actually and practically certificate is not much important). We think 1.5.3 should be deleted.

I have deleted the requirement with the Bid (see Annex 1.3), however if the contractor is to comply with a scheme how does the Engineer know which scheme and how to verify compliance?

It has no little or no meaning otherwise.

NK: JICA intention is only to apply the safety management system excluding the certification and auditing by the certification body. Therefore, 1.5.3 is considered not request certification. To JICA, is this understanding correct? この考え方で正しいでしょうか?

1.6 Checking and Validation of Submissions

1.6.1. In accordance with GC 4.9 [Quality Assurance] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination (JC13a), design and supervision staff and any independent checkers as appropriate.

NK: Is this correct that we think 1.6.1 is added in relation with design of TW, etc.?

Not only TW it also applies to his Safety Plans, Method statements, any shop or working drawings. In fact any Contractor submissions are stated.

JC13a: coordinator?

NK5/6: We think so.

1.6.2. ~~For the purposes of interpretation for JSSS, the final paragraph of GC 1.8 [Care and Supply of Documents] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible.~~ (JC14)

コメントの追加 [伊藤12]: OHSAS does not exist any more??

Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.

コメントの追加 [伊藤13]: If delete OHSAS above, delete accordingly

コメントの追加 [伊藤14]: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.

コメントの追加 [伊藤15]: coordinator?

NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.

This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. I believe that with the increased amount of submissions such as method statements, safety plans and temporary works details, there is an increased possibility that the Engineer could comment but chooses not to or even overlooks or misses, errors. If this happens there is the risk of avoiding responsibility if an error or defect (what is this?) should have been discovered. (JC14)

It is a strange but potentially onerous obligation that is inconsistent with GC 4.9 even if 1.8 does not state the consequences. GC 1.8 states: "If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect."

JC14: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1).

Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor.

We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".

NK5/6: Will modify as commented.

1.7 Contractor's Safety Plans

1.7.1. The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.

1.7.2. The Safety Plans shall set out or refer to all the health and safety requirements:

- (1) that are stated in JSSS;
- (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and
- (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site. (JC15)

IC15: See 1.2.2 (6)

NK5/6: No comment.

1.7.3. The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:

- (1) Bid Stage Safety Plan (Outline Overall Safety Plan).
- (2) Commencement Stage Safety Plan (Updated Overall Bid Stage Safety Plan)
- (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works)

NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.

I don't quite understand your comment, the Bid Stage Plan is followed by an updated plan after Commencement but this is still an early plan and the same plan (or parts of it) will probably require to be further revised and updated as the detail of works develop and before any parts of the works commence.

NK: We understand your meaning.

1.7.4. The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level throughout the Time for Completion of the Works.

コメントの追加 [伊藤16]: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1). Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor. We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".

コメントの追加 [伊藤17]: See 1.2.2 (6)

1.7.5. Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility, and at any time throughout the Time for Completion of the Works.

NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?

Yes, thank you, that is true, but better to delete the phrase rather than add.

1.7.6. Bid Stage Safety Plan:

- (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [*Content of Bid Stage Safety Plan*].
- (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

1.7.7. Commencement Stage Safety Plan

- (1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site,
- (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.
- (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.

NK: Is it not necessary to specify to review Commencement Stage SP?

Can we consider Commencement Stage SP is not be reviewed and the Engineer may review it and give comment in accordance with GC 1.8 Care and Supply of Documents though Japanese draft is specified to review it within 14 days?

Fair comment. I had modified the following clause 1.7.8 to deal with Particular Safety Plans. The Commencement Stage Safety plan is another contract stage submission subject to the same procedures so I have added it here.

Please also note the above correction to the submission date of the plan which should be twenty-eight (28) days after the Commencement Date.

1.7.8. Particular Safety Plans

- (1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.

1.7.9. Procedures for Submission and Review

- (1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works. (JC16)

JC16: Should it be "of the Works or any part thereof"?

NK5/6: We agreed the above modification.

- (2) The Contractor shall submit:
 - (a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [*Commencement Stage Safety Plan*].

コメントの追加 [岡本18]: Should it be "of the Works or any part thereof" ?

- (b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.

NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?

I have changed this.

Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP.

We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan

I disagree, many of the items mentioned in Issue 6 are to be included in the Method statement and all other items are included in Annex 1.3 all of which will be progressively developed. There is no need to include additional information here.

NK: understand.

- (3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:

- (c) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;
- (d) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and
- (e) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.

1.7.10. The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.

1.7.11. Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.

1.7.12. The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.

1.8 Risk Assessment

1.8.1. In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.

1.8.2. The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.

1.8.3. The procedural flow of risk assessment shall be as follows.

- (1) Identifying hazards.
- (2) Evaluating risks.

(3) Determining measures of risk reduction or elimination.

1.8.4. The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:

- (1) Removal of hazards such as eliminating dangerous methods of construction.
- (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
- (3) Engineering measures.
- (4) Management measures including improving skills with additional training.
- (5) Use of PPE.

NK: May we know what "improved PPE" mean?

relate

1.9 Contractor's Method Statements

1.9.1. The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.

1.9.2. Method Statements shall be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and (JC17) include details of all Permanent Works and Temporary Works with supporting documents such as:

JC17: Better to have a linkage with the risk assessment.

NK5/6: Will modify as commented.

- (1) Studies, investigations and designs.

NK: We suggest to change to "Studies, investigations, and designs"?

change

- (2) Structural calculations and any other calculations.
- (3) Specifications and technical details.
- (4) Proposed construction procedure, sequence and method.
- (5) Construction resources including superintendents, workers, operation leaders and Contractor's Equipment.

NK: We consider "worker" will be used because it is used in other Chapter though FIDIC uses "labour".

NK I have changed anyway but it now needs wider wording. labour is also used in FIDIC

- (6) Inspection and monitoring plan.

1.9.3. The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.

1.9.4. Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.

Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:

- (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with

コメントの追加 [伊藤19]: Better to have a linkage with the risk assessment.

the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.

- (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.
- (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.
- (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.
- (5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.

NK: We consider "for his information" can be deleted because this phrase is not used for Safety Plan though Issue 6 used it.

Change

1.10 Engineer's Safety Representative

- 1.10.1. ~~Unless otherwise specified in the Particular Safety Specification, the Engineer may delegate his power and authority to any of his assistant's delegated representative at the Site who (JC18) shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS.~~

IC18: Particular Safety Specification is not necessary with this modification.

NK5/6: Will modify as commented.

- 1.10.2. The terms of the appointment shall be in accordance with GC 3.2 [*Delegation by the Engineer*].
- 1.10.3. Whenever the term "Engineer" is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.

1.11 Safety Compliance Instructions from the Engineer

- 1.11.1. Without affecting or diminishing the Contractor's responsibility under GC 4.1 [*Contractor's General Obligations*] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.
- 1.11.2. If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [*Suspension of Work*] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.
- 1.11.3. If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and

コメントの追加 [伊藤20]: Particular Safety Specification is not necessary with this modification.

corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer's consent and implemented such measures to ensure that no such accident can occur. (JC19)

JC19: The sentence is not complete???

NK5/6: To Md, please review the sentence.

1.11.4. The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.12 Health and Safety Officer at the Site (HSO)

1.12.1. For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7 [Health and Safety], shall be construed as "Health and Safety Officer at the Site".

NK: HSO is defined in A1.1.1(3), so can 1.12.1 be deleted?

No. This is necessary to correspond to the definition.

Please note that this is a compromise. PC change would have been preferable.

1.12.2. Requirements for the HSO:

- (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.
- (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor's Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety].
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) ~~Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management. (JC20)~~

Where there is no legal requirement under the Laws of the Country or unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as that International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK Level 6 Diploma level or Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) in USA or an equivalent alternative internationally recognised qualification covering health and safety and risk management.

コメントの追加 [岡本21]: The sentence is not complete???

コメントの追加 [岡本22]: To NK: Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia

IC20: To NK, Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia)

NK5/6: We rechecked the qualification of HSO required in the world and tabulated below:

No	Country	Law/Regulation	Title	Requirements	Work Experience
1	Japan	Ordinance on Industrial Safety and Health	Safety Officer	1. Trained personnel for 9 hrs training course, or	University or technical college science course other courses
					in S&H 2 years
					Senior high school science course other courses
					in S&H 4 years
					in S&H 6 years
					in S&H 7 years
				2. Industrial safety consultants.	
2	USA	OSHA APPENDIX C TO §1926.65 COMPLIANCE GUIDELINES 1.Occupational S and H Program. U.S. Army Corps of Engineers, EM-385	e.g. Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) The Safety and Health Manager shall be the CSP.	CSP 1) Bachelor's degree, and 2) BCSP Qualified Credential (e.g. NEBOSH National or International Diploma in Occupational Health and Safety) 3) CSP examination	4 years of safety experience
3	UK	Internet Information	Environmental Health and safety manager	1) Bachelor's degree in Safety Engineering, etc. 2) National/International Diploma 1. NEBOSH National Diploma in Occupational Health and Safety. 2. British Safety Council Level 6 Diploma in Occupational Safety and Health., etc.	5 years related experience in environmental health and safety.
4	Singapore	Regulations	1)Representative of the Contractor 2)Safety Supervisor	1) Training and exam. of 3 days 2) Training of 10 hrs per week for 6 months (60 hrs)	
5	India	Regulation	1)Safety Officer 2)Safety Staff	1) Graduation of safety course more than 2 years in college 2) Training course	
6	Thailand	Regulation	1)Head Man Level 2)Technique Level 3)High Technique Level 4)Professional Level 5)Management Level	1) 12 hr training 2) Ditto 3) 180 hr training 4) Graduation of Occupational health bachelor course, or person trained & passed exam., or safety officer of 5 years experience and trained & passed exam. 5) 12 hr training	
7	Indonesia	Regulation	Occupational Health and safety Expert	10 days (90 hrs) training	
8	Vietnam	Regulation	Not found yet.		

NK: We found each country has its regulation regarding qualification of Safety Officer. Japanese one is almost same level as Head Man Level and Technique Level in Thailand.

In Japanese regulation, the Project Manger shall be a General Safety and Health Manager and supervise the Safety officer(s). Japanese contractors may not assign Japanese engineers directly as HSO though they have experience and knowledge of safety management in construction sites and also ability to manage safety in ODA projects. However, they have no academic certificates in Japan and also international training certificates. The Japanese contractors who work for ODA projects may employ safety specialist who having qualification required in the contract or make their engineers be certified by international organizations such as NEBOSH and BCSP. The contractor's engineers can get such certificates by on-line training course.

Japan, USA and UK give special importance to the S&H work experience, Singapore and Indonesia do to training of 60 to 90 hrs course, and Thailand do to any of bachelor, training or experience.

Actually, depending on scale and accident risk of construction project, the employer or contractor seem to determine requirements of HSO for example the following may be applied for large or complicated projects, NEBOSH International National Diploma (Level 6) in UK and CSP (Certified Safety Professionals) by BCSP in USA, for small projects, International General Certificate (A level) in UK and SMS (Safety Management Specialists) in USA.

NK: From the above, we propose to revise the (7) as above so that the qualification of HSO shall be 1) licensed or registered in the Country (legal requirement under the Laws of the Country), 2) specified in the Particular

Safety Specification, and 3) International Diploma issued by NEBOSH in UK or Certified Safety Professionals by BCSP in USA or an equivalent alternative.

(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country, and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.

NK: We consider NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot find such person. Large contractors and European contractors may find them.

We propose to add (7) "unless otherwise specified in Particular Safety Specification" before "the HSO..."

I have split this clause for clarity.

I suggest that NEBOSH is OK as it is because an equivalent alternative is acceptable (see use of this term in JSSS 1.4.7).

It is also subject to receiving the consent of the Engineer.

NK: We think "two (2) years experience outside the Country" is also too high requirement for the local contractors and also Japanese.

We propose to delete "this two years outside the Country" and specify requirement in Particular Safety Specification depending on the Works.

I suggest that it is better to state here as a basic standard. If JSSS cannot specify a general standard, the choice of Executing Agencies will vary greatly. I will draft a relevant clause for the User Guide but please note that I have reduced the experience requirements and deleted the international requirements.

1.12.3. Supporting Staff

NK-1: JICA commented and minutes recorded in January as follows:

7.1.1 (5) HSO's duties:

JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.

No this is not a correct understanding, the HSO duties and obligations are far wider which is why this clause is correct and necessary.

Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?

Yes, he will be very busy which is why he must be qualified and experience and given the full support staff that he requires and why he must receive the support of other Contractor's Personnel particularly Operation Leaders, all as stated herein.

MM: HSO should always be ultimately responsible as the leader really of the Contractor's safety team with support duties delegated as necessary to a number of personnel including Operation Leaders. This is described in Chapter 1.10.1 and has been discussed. No change is required.

NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:

3. Common requirements in JSSS

(4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の "The HSO shall inspect work area before starting work..."は、 "The Contractor shall ..."へ変更する。

HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.

From this idea, the HSO in the sentence "The HSO shall inspect work area before starting work..." shall be replaced with "the Contractor".

Please let me review the Excavation comments when I receive them, however this looks correct as he is responsible for inspecting the safety arrangements, even if another person does the inspection on his

behalf. It needs no change but the work will not always be directly inspected by him, he can and will delegate but he is singularly responsible and will sign it off.

NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).

We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor's Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.

Based on the above idea, we want to revise some sentences below.

- (1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.
- (2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.

NK: We propose to delete (2) from the idea of mentioned above NK-3. The supporting personnel shall be full time assignment. The Contractor shall establish system of daily check by the site staff or designated personnel for check by the Contractor and reporting by the site manager to the HSO.

I think that (2) is clear, correct and necessary. Please refer to the following clauses also. It can be full time assistants or other Contractor's Personnel also who shall check certain aspects and who shall also have other responsibilities given to them by the HSO.

- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) The HSO shall be expected to develop internal procedures whereby all supporting personnel; (JC21) shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.

JC21: It is understood "internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO...."

But how "and the details of any inspection, for" relates to other part of this sentence???

Non-natives would have difficulty to understand.

NK5/6: YH think the sentence can be separated as follows though no so much difficult to understand the sentence. (次のように分解できるのだと思います。それほど違和感はありませんが。)

- 1) the requirements for any inspection
- 2) the details of any inspection

To MD, we would like to review the sentence because of sentence seems too long.

- (6) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

1.12.4. Inspections

- (1) The HSO shall be responsible for ensuring:

コメントの追加 [伊藤23]: It is understood "internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO...."

But how "and the details of any inspection, for" relates to other part of this sentence???

Non-natives would have difficulty to understand.

- (a) That all working areas ~~of the Site~~ (JC22) are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;

コメントの追加 [伊藤24]: The working areas are not always a part of the Site

JC22: The working areas are not always a part of the Site

NK5/6: No comment to JC because JICA want to modify as they commented.

- (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and
- (c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*].
- (2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.

1.13 HSO - Scope of Duties and Authority

NK: JICA added "and Authorities" in the last comment.

Now changed as above.

- 1.13.1. The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.
- 1.13.2. The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:
- (1) Health and Safety Management Work:
- (a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;
- (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
- (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;
- (d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;
- (e) Temporarily stopping the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.11 [*Safety Compliance Instructions from the Engineer*];
- (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
- (g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;
- (h) Appointment of further supporting personnel (refer to 1.12.3 [*Supporting Staff*]);
- (i) Instructing and training **Operation Leaders** in the health and safety aspects of their work including requirements for inspection and **confirmation** of results to HSO;

NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above:

- (i) Instructing and training the person in charge of construction works and the Contractor's Equipment in the health and safety aspects of their work including requirements for inspection and reporting of results to HSO;

~~disagree and do not feel that any change is necessary. The position and authority of the HSO for the health safety on the Works should not be compromised. Who he requires assistance from is really his choice and it is dependent upon many factors such as the contractor's organisation, who is available, the general experience, capability and skill level of workers. We or the Engineer should have no interest in who he delegates support to providing the HSO does his job properly.~~

- (j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;
- (k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;
- (l) Planning and implementation of various training and education implementation plans;
- (m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;
- (n) Preparing regular internal and external reports on health and safety activities; and
- (o) Hazard prediction activity.

1.14 Procedure for Resuming the Works

1.14.1. If the Engineer has issued an instruction under JSSS 1.11 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [*HSO - Scope of Duties and Authority*] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.
- (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within ~~seven fourteen (14)~~ (JC23) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving ~~seven three (7)~~ (JC24) days' notice in writing of the resumption date.

To be proactive, the Engineer may give consent at any stage within the above stated time scales.

JC23& 24: 14 days are too long, and 7 days are too long.

NK5/6: Will modify as commented.

- (5) The Contractor resumes the Works or part of the Works on the due date.

コメントの追加 [岡本25]: 14 days are too long.

コメントの追加 [伊藤26]: 7 days are too long.

- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1. The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2. In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

NK: We think the 1.15 is same as Japanese draft, however, we feel it is not clear who take the following action.
Is there any good idea to express the H&S management shall be made by management personnel consisting of construction managers, Operation Leaders, HSO (for reference I added personnel in charge of the activities below.).

Please see above notes, I do not feel that the following is desirable or necessary.

For further understanding, the Contractor's Representative has similar in fact heavier responsibilities but we (nor FIDIC) consider defining which of his staff do what to support him, I do not recommend but we try to do it.

Overall Safety Management Activities:

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); ~~(by construction managers, Operation Leaders, HSO)~~
- ~~(b)~~ Attending pre-work meetings, pre-start meetings, schedule meetings; and ~~(by construction managers, HSO)~~
- (c) Monitoring the implementation of the Safety Plan. ~~(by HSO)~~

Above is not recommended.

- (1) **Daily** Safety Management of Contractor's Personnel:

NK: We would like to add "Daily" before Safety in (2) to distinguish from (1).

No problem added already.

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; ~~(by construction managers, HSO)~~
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures; ~~(by construction managers, Operation Leaders)~~
- ~~(c)~~ Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as : ~~(by construction managers, Operation Leaders)~~
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
- ~~(d)~~ Instruction and management of safety education and training; ~~(by construction managers, HSO)~~
- ~~(e)~~ Instruction and management of all safety measures; and ~~(by construction managers, Operation Leaders, HSO)~~
- (f) Site Safety Inspections. ~~(by construction managers, Operation Leaders, HSO)~~

None of above is recommended.

NK: We withdraw the addition.

NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.

No problem deleted already

1.16 Joint Site Safety Inspections

- 1.16.1. In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.
- 1.16.2. Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.16.3. Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.16.4. The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.
- 1.16.5. The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.17 Compliance Monitoring and Auditing

- 1.17.1. The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured. Such compliance shall be monitored efficiently and transparently at all times, for which purpose the Contractor shall:

NK: We propose to divide the above to two sentences because the above sentence is long and contains two subjects.

This is not quite correct but I have divided anyway

- (1) Create checklists for monitoring.
 - (2) Carry out regular and random inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents.
 - (4) Create storage and filing systems for the monitoring records.
 - (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer.
- 1.17.2. Safety inspections are intended to search for risks and hazards, which present a threat to safe working.
 - 1.17.3. The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:
 - (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
 - (2) Are the Safety Plan requirements being met?
 - (3) Is there documented proof of compliance?
 - (4) Is health and safety training effective?
 - (5) Is the Contractor's health and safety management system working effectively?
 - 1.17.4. The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.
 - 1.17.5. The audit team procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer.

~~1.17.5-1.17.6.~~ ~~Unless otherwise consented to by the Engineer,~~ The audit shall be headed by a senior member of the Contractor's head office health and safety team.

~~1.17.6-1.17.7.~~ If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.

~~1.17.7-1.17.8.~~ The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.

~~1.17.8-1.17.9.~~ The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.

~~1.17.9-1.17.10.~~ The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems.

The Audits shall not replace the regular health and safety inspections.

NK: We think the above sentence is better to be divided two sentences.

This is not quite correct but I have decided anyway.

~~1.17.10-1.17.11.~~ The audits shall be conducted ~~on a random basis~~ at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.

~~1.17.11-1.17.12.~~ The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor. (JC25)

NK: JICA deleted in the last comment. We also consider the Engineer does not do auditing but inspection/supervise the Contractor's activities, and agree to delete this.

do not really understand why it is deleted, as in any case the Engineer should be able to request/initiate an audit if he feels that the H and S system is not working properly.

NK: NK misunderstood this clause as the Engineer to do audit. We recommend now as follows:(time limit is given considering the preparation and trip time of the auditing team, and the safety management state cannot be improved in short time except such as cleaning the site, etc. If the Contractor takes actions for the auditing in short time, there is a merit for the Contractor to show example of required improvement.

The Engineer may at his option instruct the Contractor to execute a health and safety audit by giving proper preparation time for the auditing team between 3 days and 7 days.

JC25: It is not practical that the auditing team of the headquarters visit the Site within 3 to 7 days after the Engineer's instruction.

NK: 1.17.11(1.17.12) will be deleted.

~~1.17.12-1.17.13.~~ Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.

NK: JICA commented "Such "not to do" should not be included in the specification." and deleted this sentence in the last comment. We agree to delete this because the auditing team cannot come to the site from Headquarters located in other countries by short notice, and the ISO auditing is made by around one month notice or as scheduled.

No comment. to be deleted.

~~1.17.13-1.17.14.~~ An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.

~~1.17.14-1.17.15.~~ The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.18 Proper Placement of Contractor's Personnel

- 1.18.1. To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.
- 1.18.2. In compliance with GC 6.9 [*Contractor's Personnel*], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.
- ~~Change not correct~~
- 1.18.3. ~~Labourer~~ Workers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.
- 1.18.4. The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.
- 1.18.5. ~~The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement. (JC26)~~
- JC26: Duplication with 1.18.2. Also, difficult to have a concrete image on what kind of records???
- NK5/6: Will delete as commented.
- 1.18.6. The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.
- 1.18.7. Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:
- (1) Work content and work environment.
 - (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability.
 - (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
 - (4) Allocation of an achievable and safe work volume and time.
 - (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].
- 1.18.8. If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.
- 1.18.9. The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.
- 1.18.10. The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly

コメントの追加 [岡本27]: Duplication with 1.18.2. Also, difficult to have a concrete image on what kind of records???

displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that **the HSO** resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.

NK: We think it is better to replace "he" with "the HSO" though he/she is nowadays used.

It is not necessary, please refer to JSSS 1.2.2 (8) and GC 1.2 (a). I have used "He" and "his" for example consistently and if it changes here it will require further change.

1.19 Safety Training Generally

1.19.1. The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.

1.19.2. The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.

1.19.3. Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.

~~1.19.3.~~ 1.19.4. Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate). (JC27)

JC27: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.

NK5/6: Will modify as commented.

1.20 Safety Induction Training

1.20.1. Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom **he-the HSO** is responsible, including the Employer's Personnel and all other persons who are entitled to be on **the Site at** the request of the Employer or Engineer.

Ditto above

1.20.2. The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.

~~(5)~~ **Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (Refer to separate requirements for special training).**

NK: May we know where we can find to refer to special training?

Rephrase

コメントの追加 [J28]: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.

- (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.
- (7) Maintaining all working areas in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.
- (9) Firefighting; actions, precautions and control.
- (10) Health and safety rules.
- (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

1.20.3. Practical on-Site demonstrations shall be included.

1.20.4. **Training Personnel (JC28)**

JC28: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).

NK5/6: NK agreed to the above.

- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
- (2) All trainers shall be fluent in the language of the persons to be trained.
- (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.

1.20.5. **Records of education and training**

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.21 Skill Training

1.21.1. The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. ~~The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.~~ (JC29)

JC29: Not needed to say so in the specification.

NK: Will delete as commented.

1.21.2. The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available in the Country or not available

コメントの追加 [伊藤29]: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).

コメントの追加 [岡本30]: Not needed to say so in the specification.

~~in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects, the Contractor shall:~~

~~(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or~~

~~(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.~~

~~Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, (JC30) all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.~~

JC30: May be the case in many projects, but skilled staff may be sometimes locally mobilized.

NK5/6: Will modify as commented.

This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion ~~and Defect Notification Period.~~(JC31)

JC31: The Contractor also has to work during DNP and need skilled staff.

NK5/6: Will modify as commented.

Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply:.(JC32)

JC32: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences.
I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.

NK5/6: To MD, please review the comment and modify the sentences.

- (1) To compliment this OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to provide basic skill training to develop the ability of local counterpart trainee operation leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots.
- (2) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer **for his consent.**

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

consent is better which is why I have used it. There will be a great tendency for the Contractor not to comply with these requirements properly and it needs to be enforceable somehow, otherwise safety (and quality and performance) will suffer.

"For information" really has no meaning.

If only "for information", Contractor can proceed even if the course syllabus and hours are clearly inadequate and would not otherwise be acceptable.

The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

コメントの追加 [伊藤31]: May be the case in many project, but skilled staff may be sometimes locally mobilized.

コメントの追加 [伊藤32]: The Contractor also has to work during DNP and need skilled staff.

コメントの追加 [伊藤33]: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences?

I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.

Details Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.

NK: This request is specified in Annex 1.2 (24)(26) as Outline shall be submitted in Bid Stage SP.

This has been repeatedly discussed and explained.

If safety is to improve, this must happen from Bid stage onwards.

Every part of the Bid SP is Outline but some information is necessary on each subject listed in the Annex and should be submitted at Bid stage. If it is inadequate, only then can it be clarified and negotiated before the Contract is signed. After signing, is often too late.

NK: We agree to MD's opinion. However, the above sentence needs to be modified to such as "Updated details of such training mentioned in the Bid Stage Safety Plan shall be submitted."

~~1.21.2. Subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.~~

~~1.21.3. When the Contractor is satisfied that candidates have been successfully trained and qualified, and that they are able to act fully in accordance with the requirements of the Contract and subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries.~~

NK: This sentence may be necessary to be reviewed.

Please review the above. Consent is essential otherwise the working trainers will be demobilised too soon.

Please also note that this entire clause is my suggestion only. If JICA and/or NK do not want it, please advise and I will delete all such training as necessary.

~~1.21.4. It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice based upon capability in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.~~

~~1.21.5.1.21.3.~~ Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

See above notes, it really should be "consent"

~~1.21.6.1.21.4.~~ Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

1.22 Dangerous Work

1.22.1. Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.22.2. Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.22.3. The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [Permit System] that is to be worn conspicuously and be available for validation by the Engineer.

~~I have added the following because of apparent concerns over the meaning of JSSS 2.5.1.31~~

~~1.22.4. The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist (JC33) trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.~~

コメントの追加 [伊藤34]: specially ?

~~JC33: specially~~

~~NK5/6: To MD, Please check it.~~

1.22.5. A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.

~~1.22.6. The Contractor shall select, train and equip a specialist rescue team or teams of selected workers at the Site for emergency rescue operation in accordance with JSSS 1.24.6 and 1.24.7, who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue (JC34).~~

コメントの追加 [岡本35]: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.

JC34: ~~1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.~~

~~NK5/6: Will modify as commented.~~

~~1.22.7. Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC35)~~

コメントの追加 [伊藤36]: Move to 1.24

~~NK: Harness is basically used now and belts is not, so deletion of belt is made.~~

~~Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 2.~~

~~The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works~~

~~JC35: Move to 1.24~~

~~NK5/6: Will modify as commented.~~

~~1.22.8. The requirement for rescue teams and rescue equipment shall be as specified in the Particular Safety Specification.~~

~~1.22.9. 1.22.8. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC36).~~

~~JC36: ditto~~

~~NK5/6: Will modify as commented.~~

~~1.22.10. 1.22.9. The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.~~

コメントの追加 [伊藤37]: ditto

~~1.22.11. 1.22.10. Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.~~

~~1.22.12. 1.22.11. For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [Prohibition of Entry – Dangerous Work].~~

~~1.22.13. 1.22.12. Hazardous Substances.~~

(1) If the Contractor during the execution of the Works, encounters and is required by the

Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists ~~Subcontractor(s)~~ (JC37) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.

JC37: not necessarily Subcontractors

NK5/6: Will modify as commented.

- (2) ~~The Contractor shall obtain the Engineer's consent for such specialist Subcontractors and their submit detailed Safety Plans and Method Statements with respect to the removal and disposal of the Hazardous Substances shall also be submitted (JC38) to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].~~

JC38: modified accordingly

NK5/6: Will modify as commented.

1.23 Permit to Work System

1.23.1. The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.

1.23.2. The system shall be designed to control safety for ~~Dangerous Work all types of high-risk work likely to be encountered, including for example:~~ (JC39)

JC39: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.

NK5/6: Will modify as commented.

~~1.23.3. Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3 Example of Dangerous Work.~~

~~There is no need to change this or give any examples, please refer to the definition of Dangerous Work in Annex 1.1. If you insist, change to "for example" as in the following subclause~~

- ~~(1) Work in elevated positions, for example, transmission towers ladders and scaffolding, roof or ceiling work.~~
- ~~(2) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.~~
- ~~(3) Diving Works.~~

NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.

~~believe that this will vary according to the actual project scope and I recommend to leave as it is. It is better to be left to the discretion of the HSO~~

1.23.4. The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.

1.23.5. Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.

1.23.6. The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

1.24.1. ~~Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or~~

コメントの追加 [伊藤38]: not necessarily Subcontractors

コメントの追加 [伊藤39]: modified accordingly

コメントの追加 [伊藤40]: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.

~~are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.(JC40)~~

コメントの追加 [伊藤41]: Moved to 1.24.5.

JC40: Moved to 1.24.5.

NK5/6: Will modify as commented.

NK-1: JICA commented to modify and add "so specified in the Specification" to 1.20.2 in Issue 6.

NK consider that "as specified in Particular Safety Specification" between "the Works," and "the Contractor" if we follow JICA's comment.

NK-2: JICA commented that they want to use "as specified in Particular Safety Specification" more than "unless otherwise specified in Particular Safety Specification" because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSSS)

Can you specify as JICA's request to use "as specified in PSSS"?

- 1) I do not recommend any use or reliance on "as specified in PSSS". If something is then not so mentioned in PSSS, (even when it should be), this means that there is no requirement stated.
- 2) "Unless otherwise specified" followed by stated requirements is the preferred and better method as the stated requirements in JSSS are then a default and even if nothing further is stated in PSSS, there will always be these requirements to rely on. This is a "failsafe" in JSSS production.
- 3) More importantly, it must be understood that the availability of these facilities is a total Contractor responsibility under FIDIC (Clause 6.7), under which the Contractor must provide such facilities whether specified further by the Employer or not and the PSSS must not compromise this.
- 4) The problem is that work in distant and remote places is a very common feature of JICA projects (such as hydro, water supply, power, irrigation etc.) and frequently proper health and safety facilities are just not made available by the Contractor at the Site at Site at the expense of human life and safety. Often there are no local health authorities, or they are not equipped or not capable or they are too far away to be of any value. Very often contractors do not provide facilities to save money and health and safety suffers badly. This is fairly common practice and a common problem.
- 5) The changes are suggested as a means of improving this situation and they should therefore be viewed against this background.

NK-3: JICA want to clarify who "other persons who are entitled to be on the Site" are, and where "other places (if any) are.

"other persons who are entitled to be on the Site" is from FIDIC (Clause 4.8 and others) and for whom the Contractor has responsibility for care, protection and safety. This is all-embracing and extends beyond Contractor's Personnel and Employer's Personnel to allow anyone who has a legal entitlement to be there (e.g. other contractor's, residents, others who have a right of way through the site, families of site staff if formally living there and others). I have stated this so that the extent of contractor's compliance with JSSS is clear and so that it does not diverge from the contract. I do not recommend that it is changed. and any other places as may be specified in the Contract as forming part of the Site" comes from the definition of Site (JC 1.1.6.7) which I have already deleted throughout for clarity and for which will consider and may add an appropriate note in the User Guide.

1.24.2. The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.

1.24.3. ~~Unless otherwise specified in the Particular Safety Specification, m(JC41)Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site.(JC42) If so specified in the Particular Safety Specification, such medical services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.~~

コメントの追加 [伊藤42]: "Free of charge for everyone" need not to be as default. I don't believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!

If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.

コメントの追加 [伊藤43]: See comment to 1.2.2 (6)

NK: JICA want to clarify where “other places (if any) are.

~~Deleted see above~~

JC41: Free of charge for everyone” need not to be as default. I don’t believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!

If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.

JC42: See comment to 1.2.2 (6).

NK5/6: Will modify as commented.

NK5/6: YH inquired if the sentence of “the family members of all other persons” is necessary to be deleted.

1.24.4. The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.

1.24.5. ~~Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example include~~The Contractor shall provide the following medical and first aid facilities:

- ~~(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.~~
- ~~(2) First aid training, appointment of first aiders and dissemination of information.~~
- ~~(3) Type of communication facilities and measures for emergency response.~~
- ~~(4) Medical staff to be assigned at the Site.~~
- ~~(4) Medical Facilities on the Site together with description of equipment and consumables.~~
- ~~(5) Temporary water and power supply to maintain use during mains supply failure.~~
- ~~(6) Transportation facilities, Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.~~
- ~~(7) Additional facilities specified in the Particular Safety Specification, if any.~~
- ~~Medical staff to be assigned at the Site.~~
- ~~(3) Emergency medical services where necessary. (JC43)~~

NK: We feel that the provision of medical services seems excessive unless health insurance can cover it.

~~I disagree if it means saving a life. Whether health insurance covers it or not is irrelevant. There will be situations where it is available and necessary to save life, so can JICA say that fatality is acceptable as the alternative was too expensive.~~

JC43: Where the Site is located in a large distance from a sufficiently equipped hospital.

NK5/6: Will modify as commented.

- ~~(4)(1) Medical Facilities on the Site together with description of equipment and consumables.~~
- ~~(5)(1) Temporary water and power supply to maintain use during mains supply failure.~~
- ~~(6)(1) Type of communication facilities and measures for emergency response.~~
- ~~(7)(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.~~
- ~~1.24.6. First aid training, appointment of first aiders and dissemination of information.~~

~~1.24.7.1.24.6. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor’s Personnel and Employer’s Personnel and all other persons who are entitled to be on the Site. (JC44)~~

JC44: See comment to 1.2.2 (6)

コメントの追加 [伊藤44]: See comment to 1.2.2 (6)

NK5/6: Will modify as commented.

~~1.24.8.1.24.7. Where the Works include the following for example, †The Contractor shall train selected Contractor’s Personnel to perform emergency rescue operations in a safe manner in the event of any accident. Workers so trained †(JC45) are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.~~

コメントの追加 [伊藤45]: Merged with 1.22.6

JC45: Merged with 1.22.6

NK5/6: Will modify as commented.

- (1) ~~Work on or near existing electrical equipment, cables, wiring, services and systems.~~
- (2) ~~Dangerous Work such as Confine Spaces, work at height.~~

NK: We consider describing example as above.

Please see above notes and Annex 1.1 Definitions. I do not agree that any such examples are necessary

~~(3)(1) Diving Work. (JC46)~~

JC46: Diving work is also Dangerous Work

コメントの追加 [伊藤46]: Diving work is also Dangerous Work

NK5/6: We cannot understand how to this comment (JC46). To MD, please review this comment.

~~(4) Similar special circumstances.~~

~~1.24.9.1.24.8. Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC47)~~

JC47: Move from 1.22.

This should be “may” since the nature of Works may vary.

コメントの追加 [伊藤47]: Move from 1.22
This should be “may” since the nature of Works may vary.

NK5/6: To MD, please review this comment.

~~1.24.9.2.4.9. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC48)~~

JC48: Move from 1.22

コメントの追加 [伊藤48]: Move from 1.22

NK5/6: Will modify as commented.

~~1.24.9.3.1.3.1. All rescue team members Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].~~

~~1.24.9.3.1.3.2. Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].~~

NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.

Better to delete reference here “as recommended by OSHA” and include your clear requirements in JSSS 2.9 [PP and First Aid]. (JC49)

JC49: Agree.

コメントの追加 [伊藤49]: Agree

NK5/6: Will modify as agreed.

1.25 Measures at the Time Accidents Occur

1.25.1. When an accident occurs, the HSO the Contractor shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:

NK: JICA added in the last comment.

NK: We consider “the HSO” shall be “the Contractor” as mentioned in Issue 6. (JC50)

コメントの追加 [伊藤50]: Agree

I disagree completely and do not recommend this (or any such) change. As I have explained repeatedly, the HSO must have this authority in order to fulfil his safety control functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible.

JC50: Agree.

NK5/6: Will modify as agreed.

- (1) Safely locate and extract casualties.
- (2) Provide first aid treatment at the Site.
- (3) Implement Secondary accident prevention activities, including:
 - (a) Preserving the accident site, make safe and prevent anyone interfering or entering;
 - (b) Discontinuing construction work related to or in the vicinity of the accident; and
 - (c) Implementing any further measures instructed by the Engineer.

1.25.2. Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident.
- (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The Accident Report shall include details of ~~the HSO's~~ the Contractor's recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].

Please see above notes on this subject. This should remain as the HSO. I disagree and do not recommend this (or any such) change.

1.25.3. For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].

1.26 Emergency Response Plan

1.26.1. To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and ~~as far as reasonably possible~~ shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.

The Contractor shall ~~the~~ take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, ~~where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have and to reasonably avoided, or~~ overcome or lessened the effects to a reasonable extent. [JC51]

NK-1: Can we delete one of two "reasonably possible" above?

Yes, delete as above

NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).

With the changes to your draft that have now been agreed, I have already modified JSS 2.7 and I thought that the above can now be deleted as shown, however your later comments against 1.26.5 are confusing me greatly and I am unsure. Can you please answer my request against 1.26.5 first and I can then modify the above if necessary

JC51: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.

NK5/6: Will modify as commented.

1.26.2. The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground

コメントの追加 [伊藤51]: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.

surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

It is perfectly correct as it is however have split it. [JC52]

JC52: Thank you for being non-native friendly.

FIDIC 1999 and MDB version have been supported worldwide because of its “understandability”. Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

NK5/6: No comment.

- (1) The safety of Employer’s Personnel, Contractor’s Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.26.3. Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage and flooding arising from such flooding, earthquake or volcanic activity.

NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.

Yes this can be changed as above

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer’s Personnel, Contractor’s Personnel and all other persons entitled to be on the Site and (JC53) to any third parties and neighbours and property not connected with the Works but potentially affected thereby.

JC53: See 1.2.2 (6).

NK5/6: Will modify as commented.

- (2) Provision of temporary support to all sides and soffits of excavations or portal of portal of (JC54) tunnelling of sufficient strength, durability and suitability.

NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel.

My recommendation is still (as written) to leave it as it was and make this as wide a term as possible to increase the coverage. There is no acceptable definition of “portal” and this change just introduces argument on interpretation, why change

NK: We accept to leave as it is

JC54: Better to add.

NK5/6: Will modify as commented.

- (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.26.4. Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [Contractor’s General Obligations] and JSSS 1.9 [Contractor’s Method Statements].

コメントの追加 [伊藤52]: Thank you for being non-native friendly. FIDIC 1999 and MDB version have been supported worldwide because of its “understandability”. Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

コメントの追加 [伊藤53]: See 1.2.2 (6)

コメントの追加 [伊藤54]: Better to add

1.26.5. Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

~~This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract.(JC55)~~

NK: We consider that the Contractor may have difficulty to assume what activities can be made.

We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.

Which underlining? In 1.26.5

Please see 1.26.6 for my assumption of your requirements.

Your draft has never been clear to me and I am still having difficulty to understand what your draft means and what are your intentions and requirements.

Please note:

1) The Contractor can only plan for what he can reasonably foresee or anticipate and

2) It is necessary to state this so that no confusion is introduced with FIDIC GC 19

3) This only leaves simple search and contact activities which has little or no meaning.

JSSS cannot specify what other measures the Contractor is to take after a Force majeure event (which I guess your emergency plan is trying to cover) as these events and any counter measures cannot be predicted.

Please can you clarify exactly what you are requiring the Contractor to do in the event of an earthquake, hurricane, typhoon or volcanic activity, so I can finalise this clause and also JSSS 2.7.

JC55: Better to jump to 1.26.6 without this.

NK5/6: Will modify as commented.

1.26.6. The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels.

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

1.26.7. The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

コメントの追加 [岡本55]: Better to jump to 1.26.6 without this.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.26.8. Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site. (JC56)

JC56: See 1.2.2(6).

NK5/6: To Md, please review this comment.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.26.9. If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.26.10. The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.

1.26.11. For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].

1.27 Contractor's Safety Committee and Regular Safety Meetings

1.27.1. The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.27.2. Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of labour union, if any Contractor's Personnel.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.27.3. The HSO shall be the chairman of the Safety Committee.

1.27.4. The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

コメントの追加 [伊藤56]: See 1.2.2(6)

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Hazards, safety and health problems identified by any members of the Safety Committee;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence;

NK: Are the phrases in red to be added?

Is this sort of comment really necessary? Yes it can be changed but this is only an abbreviated sample agenda.

- (d) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (e) Safety instructions received from the Engineer;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country;
- (h) Safety and health awards, media attention and the like; and
- (i) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
- (j) Other matters.

NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion.

Again, is this sort of comment really necessary? I have changed this

1.27.5. Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.28 Engineer's Regular Safety Meetings

1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries in the previous month and measures to be taken to prevent any reoccurrence;

NK: Are the phrases in red to be added?

ditto above

Is the sequence here acceptable or shall it change as above?

- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Status of resolution of previous problems;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country; and
- (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.
- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.
- (5) The Engineer shall issue a formal instruction for any variation requests.

1.29 Project Safety Committee

1.29.1. On larger Projects with multiple contract packages and contractors and **unless otherwise stated** in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.29.2. Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.29.3. The Chairman of the Safety Committee **shall** be the Employer.

1.29.4. The Employer **shall** hold regular Project Safety Committee meetings, **on a monthly basis** unless otherwise agreed.

NK: JICA commented to delete this as holding meetings are **not monthly basis but optional**.

We propose "**periodically as requested by the Employer**" and ask you to reply to this comment as reply is not mentioned in the document with notes.

Please clarify what you want to be deleted.

NK: Deletion is "on monthly basis".

1.29.5. The Employer **shall** prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

NK: JICA commented to replace "shall" with "may" in Clauses 1.29.3 to 1.29.5.

We want to ask you to reply to this comment as reply is not mentioned in the document with notes.

Please note that I have already edited the first paragraph to state "unless otherwise specified."

With this change I think that no other change is necessary.

NK: MD 氏の回答をご参照願います。

1.30 Health and Safety Coordination with Other Contractors

NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer.

We propose to move them to the User Guide.

I disagree, this affects the Contractor also and it is important that it is stated here so that there is common and very clear legal agreement between Employer and Contractor on who does what.

I think that this requires mention in both JSSS and the User Guide to avoid future dispute.

Please also note my understanding that the User Guide is not a part of the Contract and please let me know if you require differently.

NK: MD 氏の回答をご参照願います。

1.30.1. Refer to GC 2.3 [*Employer's Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer,
- (3) the personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] and GC 4.18 [*Protection of the Environment*].

The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.

When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.

1.30.2. The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.30.3. If any other contractors are employed by the Employer or if any legally constituted public authorities responsible to the Employer is working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: as and when considered necessary by Engineer.
- (2) Unless otherwise agreed, attendees shall include representatives of:
 - (a) The Employer;
 - (b) The Contractor;
 - (c) Other contractors employed by the Employer; and
 - (d) Personnel of any legally constituted public authorities.

NK: We considers it is easy to understand attendee by adding “who may be employed in the execution on or near the Site of any work not included in the Contract.” to (d) though it mentioned in the first sentence.

don't understand your comment, please advise what change you require (本 Q&A は無視願います。)

- (3) Agenda should relate to coordination among different contractors including for example:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer’s Personnel, the Employer’s other contractors and the works of any legally constituted public authorities;
 - (c) Accidents, injuries **in the previous period** and measures **to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

See previous note

- (d) Status of resolution of previous problems;
- (e) Items to be coordinated with police, fire department and other related organisations;
- (f) Compliance and registration requirements under the Laws of the Country;
- (g) Safety and health awards, media attention and the like; and
- (h) Other matters.

1.30.4. Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the **Engineer’s** monthly progress report. (JC57)

JC57: **Engineer’s monthly progress report is normally not shared with the Contractor. Delete “Engineer’s” to mean Contractor’s progress report.**

NK5/6: Will modify as commented..

コメントの追加 [岡本57]: Engineer’s monthly progress report is normally not shared with the Contractor. Delete “Engineer’s” to mean Contractor’s progress report.

1.31 Safety Statistics

1.31.1. The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.31.2. Actual statistics shall include the following:

- (1) **Accident: description, casualties, location, time, type and cause.**
- (2) **Near-miss: description, ~~casualties~~, location, time, type and cause.**
- (3) **Lost-time: lost hours of casualties, duration of discontinuation.**
- (4) **Remedial measures taken.**
- (5) **Total working hours for calculation of frequency rate, severity rate and annual incident rate.**
- (6) **Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.**
- (7) **Record of reports as may be required by government authorities.**

- (8) Number of health and safety staff.
- (9) Number of Contractor's safety meetings and frequency.
- (10) Number of candidates given safety induction and other training.

NK: Are "candidates" replaced with "Contractor's Personnel"?

No, they are all candidates for training and can include others e.g. Employer's Personnel and others, etc.

- (11) Number of safety inspections,
- (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (13) Instructions issued for unsafe behaviour or unsafe site conditions.
- (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (15) Engineer's Instructions issued for work suspension.
- (16) HSO instructions issued for work stoppage. (JC58)
- (17) Others.

JC58: Statistics and Records are mixed.

1 to 3 and 5 relate to statistics.

4 and 6 to 16 relate to records.

It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32".

By doing this, things will be streamlined : "statistics → records → their reporting"

NK5/6: Will modify as commented.

- 1.31.3. All data shall be in a format and content given consent by the Engineer.
- 1.31.4. The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.
- 1.31.5. The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].

1.32 Safety Reports

- 1.32.1. The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:
 - (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.

NK Is it necessary to add "for"?

Yes, it can be

- (2) Contractor/HSO and Joint Site Safety Inspections. (JC59)

JC59:Joint Site Safety Inspection Report ?

NK5/6: Will modify as commented.

- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [Progress Reports].

1.33 Health and Safety Records

- 1.33.1. The Contractor shall keep health and safety records for the following:

コメントの追加 [伊藤58]: Statistics and Records are mixed.

1 to 3 and 5 relate to statistics.
4 and 6 to 16 relate to records.

It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32".

By doing this, things will be streamlined : "statistics → records → their reporting"

コメントの追加 [伊藤59]:Joint Site Safety Inspection Report ?

- (1) Accidents, fatalities, near-misses.
- (2) Inspection records and checklists.
- (3) Meetings for safety and health management.
- (4) Monitoring of safety and health management activities.
- (5) Health and safety education and training for the Contractor's Personnel.
- (6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
- (7) Work environment records and other records required by JSSS Chapter 2 [*General Safety Measures*] and other parts of JSSS.

1.33.2. All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.

1.33.3. A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [*Safety Reports*].

1.34 Health and Safety Incentive Schemes

1.34.1. The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.

NK: May we know if the word of "legitimate" (conforming to the law or to rules) is necessary?(対応済み)

We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.

Related see above

1.34.2. It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.

1.34.3. It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.

1.34.4. Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.

1.34.5. Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.

1.34.6. The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.

1.34.7. As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.

1.34.8. The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [*Safety Reports*].

1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE

1.35.1. Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

1.35.2. The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO for his delegated and technically qualified assistant (JC60) at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.

コメントの追加 [伊藤60]: Agree with MD

NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system.

We want to ask you to modify the 1.35.2 as the above.

As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 [Supporting Staff] where this is explained.

do not recommend your suggested change.

JC60: Agree with MD

NK5/6: Will modify as commented.

If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

1.35.3. The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.

If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.35.4. As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

(1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works (JC61) of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.

コメントの追加 [岡本61]: Temporary Works is covered in (2)

JC61: Temporary Works is covered in (2).

NK5/6: Will modify as commented.

- (2) New or recent Contractor's Equipment and Temporary Works, ~~not more than five (5) years old upon the date that it is mobilised to the Site~~, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.

Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor ~~before shipment before delivering the Site (JC62) by an independent testing, inspection and certification agency~~ to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.

コメントの追加 [伊藤62]: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant?

NK: We considers in actual basis as follows:

- Q1: Is Scaffoldings classified in (1) TW? If so, no need to discuss the inspection of Scaffoldings before shipment? Shall Scaffoldings be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?

Steel and system scaffolding etc. is considered as Contractor's Equipment but other types may be TW. This is also not covered by Chapter 4 of your draft.

I have defined this is 1.35.1 and as it is an important item for which there should be no future argument.

- Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffoldings, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.

Yes, see it includes all of these and yes much will be constructed or assembled at the Site but some major components (e.g. steel sheet piling, anchors, support systems and other components and materials) may be imported in which case this applies. Please refer also to definition in 1.35.1.

Can we delete "and Temporary Works" in (2)?

I do not recommend it.

- Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.

This is not my recollection although it was mentioned as examples and my explanation covered all types of Contractor's Equipment.

We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies own old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too.

If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.

If you don't want pre-inspection at origin that is of course your choice. How to ascertain that it is compliant if there is no pre-inspection? It is too late when it arrives on site. I have given my suggestion and repeatedly explained this.

If JICA do not what this to apply, please let me have your instructions on what shall be changed and how.

We propose to delete the 2nd sentence above.

I do not agree for above reason but respect your wish. Just delete it.

In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."

JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair or maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."

There is no reason why anything should be added here and do not suggest that this is added as it is unnecessary duplication.

- Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old.

The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?

JICA are paying market bid rates for the best most productive and safest equipment, why should this be compromised? I have already given my explanations and recommendation, please let me have your instructions on what this shall be changed to or if it shall be deleted.

Many contractors will definitely not like this age imposition because it is regularly abused in the pursuit of profit. JC62: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant.

NK5/6: Will modify as commented.

1.36 Health Matters

1.36.1. The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.36.2. Healthcare services and facilities at the Site shall be made available free of charge, to or for the use of the Contractor's Personnel, the Employer's Personnel and all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such healthcare services shall also be made available for free of charge for the family members of the aforementioned personnel/persons. (JC63)

JC63: Same comment as 1.24

NK5/6: Will modify as commented.

1.36.1.1.36.3. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC64)

JC64: See 1.2.2 (6).

NK5/6: Will modify as commented.

1.36.2.1.36.4. Occupational health care shall be provided by the Contractor and shall include ~~for~~ example:

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) Avoiding (JC65) Frequent or excessive manual handling of loads, stress and fatigue.

JC65: Better to add ???

NK5/6: Will modify as commented.

- (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability. (JC66)

JC66: Is this health care service?

NK5/6: Will modify as commented.

1.36.3.1.36.5. The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:

コメントの追加 [伊藤63]: Same comment as 1.24

コメントの追加 [伊藤64]: See 1.2.2 (6)

コメントの追加 [伊藤65]: Better to add ???

コメントの追加 [伊藤66]: Is this health care service?

- (1) Health care staff to be assigned at the Site.
- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational ~~H~~ healthcare proposal.
- (6) Temporary water and power supply to maintain use during mains supply failure.
- (7) Type of communication facilities and measures for **emergency response**.

NK: May we know example of emergency response?

Please let me know what facilities you require and I will add.

NK: We will further consider it.

~~1.36.4. Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site.~~

1.36.6. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC67)

JC67: See 1.2.2 (6).

NK5/6: Will modify as commented.

~~1.36.5.1.36.7.~~ Report of Serious Illness

- (1) The Contractor shall inform the Engineer and submit details of any serious illness.

NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.?

It is up to you. Under GCC 6.7 The Contractor is required to maintain records and make reports concerning health matters to the Engineer as the Engineer may reasonably require. This is a further suggestion to try to reduce the volume and contents of report to be prepared.

Please see (4) following, the above can be omitted if required.

- (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.
- (3) The report shall include details of the **HSO's** recommended counter-measures.

NK: Is "HSO" replaced with Contractor as same as (2) above?

No. I do not recommend this. Please refer to the previous notes on this subject, the Contractor may send it but the Health and Safety Officer will prepare it.

- (4) The Engineer is to be consulted on the types of illness for which reports are to be informed.

1.37 Design and Management of Temporary Works

1.37.1. Unless otherwise specified in the Particular Safety Specification, **the Contractor is** required to comply with **the management standard with respect to design, erection, use and dismantling of**

コメントの追加【伊藤67】: See 1.2.2 (6)

Temporary Works provided in Section 1 and Section 2 of BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework (JC68)

Changed already

JC68: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.

NK5/6: Will modify as commented.

1.37.2. An alternative standard is acceptable by reference to JSSS 1.4.7 [*Specified Standards and Regulations*] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works including Class A Falsework (JC69).

NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specified specially referring to the following BS5975?

Section 1. General 1 Scope: "This guidance is also applicable to the design of what is termed class A falsework (1) in BS EN 12812:2004, the design of which is for example specifically excluded from BS EN 12812:2004.

Please also refer to BS 5975, Foreword, page VII, penultimate paragraph.

The European standard on falsework, BS EN 12812, exists in parallel with this British Standard. It specifies performance requirements for the design of falsework in accordance with one of three classes: A, B1 and B2. Limit state design methods are specified for design classes B1 and B2. It does not provide guidance for the structural design of Class A. It is recommended that Section 3 is used to provide guidance for Class A falsework.

It appears to follow that BS EN 12812 is not necessarily an acceptable alternative for example because Class A is excluded. I have assume therefore that it is necessary to state the need for Class A Falsework.

Please be aware that I have not reviewed or studied the BS in detail so please do not assume that I have. I do recommend that it is studied by JICA and NK to ascertain that it is applicable.

Previous clause 1.34.3 regarding alternatives is not now required as I have drafted and included JSSS 1.4.7 [*Specified Standards and Regulations*] to cover this generally.

Previous clause 1.34.6 has already been deleted.

There is no need for the suggested insertion into the following clause (previous Clause 1.34.7) as per Ho san's comment.

JC69: delete it?

NK5/6: Will delete as commented because the sentence is for the management of Temporary Works, so Class A Falsework; one of TWs, is not needed to be specially mentioned.

1.37.3. It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.

1.37.4. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.

1.37.5. The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.

~~1.37.6. Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].~~

JC: JICA commented as follows:

Issue 6 1.34.8 Too much to require the Contractor name all the specialist staff at the Bid stage. It is also excessive to require consent of the Engineer for those specialist staff.

コメントの追加 [岡本68]: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.

“Necessary qualification” can be combined with 1.34.12 or 1.34.13.

Issue 6 1.34.9 If comply with JSSS1.9, all the specialist staff shall be appointed before the commencement, and subject to the Engineer’s consent.

NK: From this comment, the 1.37.12 below is enough requirement. 1.37.6 above specifies to refer to 1.12, which 1.12 is for HSO, it seems difficult to apply for personnel of TW.

As 1.3.12 specifies requirement and necessity of consent of the Engineer, we propose to delete 1.37.6.

~~Understand your comment and have no objection to the deletion of 1.37.6.~~

1.37.7. Without affecting the Contractor’s responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor’s Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [Contractor’s Method Statements]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor’s design or methods.

The Engineer ~~may has no obligation under the Contract to~~ review Temporary Works design, ~~however he may choose to do so~~ for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 ~~or any other acceptable standard in accordance with JSSS 1.37.2. The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [Engineer’s Duties and Authority] Sub-Subclause (c) and issued without prejudice to the Contractor’s overriding responsibility for the safety and adequacy of the Temporary Works.~~

I have given further thought to the following clause which was originally considered as an exception. I am now of the opinion that offering such alternative to an Employer to state his requirements in the PSSS is not a good idea as it may result have a negative effect.

Most JICA funded projects are large projects and will have a Temporary Works content.

I suggest that the following alternative clause should be deleted to make these important requirements very clear.

If there is only a small and simple TW content, even if the BS 5975 is applied it will not cause any major harm or cost.

The sample specification provided some time back by JICA for the Hong Kong Project showed that all work shall comply with the BS. (JC70).

NK: MD 氏は上記の理由で次の 1.37.8 の条項は不要であると考え削除を提案しています。ご検討をお願いします。

JC70: Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

NK5/6: Will modify as commented.

1.37.8. ~~Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:~~

- ~~(1) — Appointment of appropriately qualified and experienced staff.~~
- ~~(2) — Preparation of adequate Temporary Works designs.~~
- ~~(3) — Independent internal or external checking of the Temporary Works Design.~~
- ~~(4) — Preparation of a Temporary Works register and records~~

コメントの追加 [伊藤69]: Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

- (5) ~~Pre erection inspection of all Temporary Works, including materials, components and equipment.~~
- (6) ~~Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to:~~
- (a) ~~Check that the Temporary Works have been erected in accordance with the design and issue by the HSO Contractor of a suitable sign showing it as complete and safe to use; and~~
- (b) ~~Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO Contractor of a suitable sign showing that it is ready for dismantling.~~

NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause,

we consider HSO will be replaced with Contractor as JICA commented:

Should it be HSO? When BS5975 applies. TWC/TWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?

~~The above applies when BS 5975 doesn't therefore I suggest (subject to JICA and NK agreement) that this can be deleted.~~

~~However, yes, the Temporary Works staff are all involved to make sure that the Temporary Works are designed and executed correctly, however the HSO is ultimately responsible for ALL safety on the Works and nothing should avoid his overview. I recommend that this should remain as HSO. I believe that it is a correct requirement which in practice should not be more than a counter signature.~~

1.37.9. In accordance with JSSS 1.18 [*Proper Placement of Contractor's Personnel*], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.

NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?

~~I understand and agree with your comment. However, JSSS 1.18 gives rules for the proper placement of Contractor's Personnel and it probably better therefore to rephrase this as above.~~

~~The following clause can be deleted~~

~~1.37.10. For further information on Method Statements refer to JSSS 1.9 [*Contractor's Method Statements*].~~

1.37.11. For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [*Inspection and Monitoring of Temporary Works*].

~~1.37.12. Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties. and shall obtain the consent of the Engineer.~~

NK: We think 1.3.12 is too long sentence to clearly understand requirement.

~~Yes I agree and have reworded this as above.~~

Q-1 Is consent by the Engineer given to specialist staff?

~~This part can be deleted.~~

Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?

We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.

~~have reworded all, please refer to the above~~

1.38 ~~User Training~~(JC71)

コメントの追加 [岡本70]: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.

JC71: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important

NK5/6: Will delete as commented.

NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

Recommend that it be included here as a default requirement

~~1.38.1. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.~~

~~1.38.2. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.~~

~~1.38.3. User Training shall vary according to the scope of the Works however it shall generally cover the following:~~

- ~~(1) Safe system and Plant use, operation and process control.~~
- ~~(2) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements~~
- ~~(3) Training in use of all hardware and software packages.~~
- ~~(4) Laboratory control (sampling and analysis) including operation of laboratory equipment.~~
- ~~(5) Recording and reporting.~~
- ~~(6) Emergency operation procedure.~~
- ~~(7) Maintenance management procedures.~~
- ~~(8) Inventory and store control systems.~~
- ~~(9) Particular safety procedures, including:
 - ~~(a) Safe working procedure;~~
 - ~~(b) Housekeeping of the facilities;~~
 - ~~(c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and~~
 - ~~(d) Safety measures for the Works and all items of Plant.~~~~

~~1.38.4. Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.~~

~~1.38.5. The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.~~

~~1.38.6. Other requirements for User Training~~

- ~~(1) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.~~
- ~~(2) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.~~

- ~~(3) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.~~
- ~~(4) The Engineer may choose to send representatives to witness the training.~~
- ~~(5) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.~~
- ~~(6) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.~~
- ~~(7) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty six (56) days before any training commences.~~
- ~~(8) Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.~~
- ~~(9) The Contractor shall use visual media as much as possible throughout the training process.~~
- ~~(10) Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.~~
- ~~(11) The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.~~
- ~~(12) Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.~~
- ~~(13) The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.~~
- ~~(14) The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.~~
- ~~(15) Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.~~
- ~~(16) The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty six (56) days.~~
- ~~(17) Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week days.~~
- ~~(18) Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not~~

~~sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.~~

~~(19) The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.~~

1.39 Unexploded Ordnance (UXO)

NK: we considers JICA may not specify 1.39 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

MD's reply: The Employer should inform the Contractor of the likely existence of UXO and if possible remove. The Contractor shall report any UXO then found to the Employer/Engineer for further instruction. This needs to be included in JSSS and the User Guide so that both parties are aware of the other's obligations. I have edited this to make the Employer responsible and have and separated accordingly.

NK: We have no comments to 1.39. xd v

For your further information, please note that this is an Employer's Risk under GC 17.3 (d).

The problem is, that GC 17.3 places no obligation upon the Employer (who should be more aware than anyone of the possible risk) to advise of the existence, to survey and remove such UXO before bidding or after if then encountered.

This is the reason behind including this in JSSS.

This clause may need some slight modification when I gain work on the User Guide.

- 1.39.1. If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.
- 1.39.2. Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.
- 1.39.3. Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.
- 1.39.4. Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.
- 1.39.5. Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy of the further clearance certificate together with any further instructions from the Engineer.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:

- (1) **“Executing Agency”** means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer.
- (2) **“GC”** and **“PC”** followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) **“Health and Safety Officer”** or **“HSO”** means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [*Health and Safety*] as construed in accordance with JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].
- (4) **“JICA Standard Safety Specification”** or **“JSSS”** means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works.
- (5) **“Method Statement”** means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] and supplemented by JSSS 1.9 [*Contractor’s Method Statements*].
- (6) **“Operation Leader”** (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations and who can also be referred to within the OSHA definition as a “Competent Person”.
- (7) **“OSHA”** means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- (8) **“Particular Safety Specification”** means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project ~~as illustrated in Annex 1.4 [Figures and Illustrations].~~
- (9) **“Project Safety Specification”** means the document that contains Part 1 [JSSS] and Part 2 [Particular Safety Specification] ~~as illustrated in Annex 1.4 [Figures and Illustrations].~~
- (10) **“Project”** means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (11) **“Safety Plan”** means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the

entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor's General Obligations*] as supplemented by JSSS 1.7 [*Contractor's Safety Plans*].

- (12) “**Safety**” shall also mean “occupational health and safety” and “health and safety”.
- (13) “**User Guide**” means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.

NK: There is no “User Guide” specified in JSSS. Does it necessary to define it in JSSS?

I think as it will be published on line probably at the same time as JSSS, it does need definition and more importantly, it requires a clear statement in JSSS, that it is NOT a part of the Contract (see added clause JSSS 6.

It is my understanding that the User Guide is for the reference of the Employer only and it is probably also a good idea therefore to describe it as “An Employer’s Guide” or something like that to make it very clear.

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

- (1) “**Accident Response**” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [*Accident Response Plan*].
- (2) “**Confined Spaces**” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Cofferdam**” means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.
- (4) “**Dangerous Goods**” means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (5) “**Dangerous Work**” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.
- (6) “**Diver**” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.
- For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [*Diving Works*].
- (7) “**Earthwork Support**” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.
- (8) “**Elevated Access Structures**” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.

- (9) “**Emergency Response**” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.26 [*Emergency Response Plan*].
- (10) “**Falling Objects**” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.
- (11) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (12) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (13) “**Hazardous Substances**” means any substance, whether solid, liquid or gas, that may cause harm to health.
- (14) “**Hazardous Areas**” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as **Zone 0, Zone 1 or Zone 2, where:**
- (a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;
 - (b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and
 - (c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.

NK: May we know the source of Classification?

May we know if this Zones are specified in JSSS?

Classification of Zones is from the Technical Measures Document of HSE

<https://www.hse.gov.uk/comah/sragtech/techmeasareaclas.htm>

OSHA also have a classification which is more complicated.

Please be aware that in the absence of information in your draft, this is my suggestion but in every case and I rely on JICA and NK to check and confirm this. If you do not want to use this, please advise me and I will delete.

NK, 再考いたします。(現時点ではJSSSでは規定していません。)

- (15) “**Hoisting Operation**” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.
- For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [*Hoisting and Rigging*].
- (16) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.
- (17) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level.
- (18) “**Personal Fall Restraint System**” or “**PFRS**” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of

workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.

- (19) **“Personal Protective Equipment”** or **“PPE”** means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.
- (20) **“Safety Belt”** means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.
- (21) **“Safety Harness”** means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.
- (22) **“Scaffold”** or **“Scaffolding”** means a temporary structure or structures that provide access on or from which persons work or to support Goods.
- (23) **“Skill Training”** means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (24) **“Spotter”** means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*].
Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.
- (25) **“Trade Effluent”** means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.
- (26) **“Unexploded Ordnance”** or **“UXO”** shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.
- (27) ~~“User Training” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.~~
- (28) **“Working Platform”** means a platform on or within a scaffold that is intended and designed to support persons or Goods.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

AED	Automatic External Defibrillator
BMGV	Biological Monitoring Guidance Values
CPR	Cardiopulmonary Resuscitation
ODA	Official Development Aid
OJT	On Job Training

PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings
TWA	Time Weighted Average
WEL	Workplace Exposure Limits

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ACI	American Concrete Institute
ANSI	American National Standards Institute.
ASHTO	American Association of State of Highway Transportation Officials
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials.
BS	British Standard.
BS EN	British Standard European Norm.
HSE	UK Health and Safety Executive.
ISO	International Organisation for Standardisation.
ILO	International Labor Organization.
JIS	Japanese Industrial Standards.

A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.

Annex 1.2: Content of Bid Stage Safety Plan

~~A1.2.1 This Annex lists the required content for the Bid Stage Safety Plan which is to be provided in accordance with “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA). The Safety plan is to be included in the Bidding Documents Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF-39.~~

NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?

~~I think both are useful as the contractor should also be aware of requirements.~~

~~It is very important that the Employer/Consultant are prevented from altering the detail of this Annex in their Bidding Documents in any way, as all items are required in the Bid Stage Plan, all are coordinated with JSSS, the same structure, terminology and numbering must be used.~~

~~I suggest that this will be reworded something like the following, which I will do when go back to work on the User Guide further.~~

~~A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor’s Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.~~

~~A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder’s intentions, so that this can be understood and properly evaluated. (JC72)~~

JC72: Please add “outline (or policy?) of risk assessment” as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11) “Safety Plan” means a document (or documents) that contains the *overall risk assessments* together with the details of all health and safety arrangements, methods.....

NK5/6: To MD, we would like to ask you to add as commented.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder’s Corporate Policy on Health and Safety Management

A description of the Bidder’s corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder’s head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder’s Personnel

A description of the health and safety management organisation at Site headed by the Bidder’s Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor’s Personnel involved in health and safety management at the Site.

コメントの追加 [伊藤71]: Please add “outline (or policy?) of risk assessment” as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11)
“Safety Plan” means a document (or documents) that contains the *overall risk assessments* together with the details of all health and safety arrangements, methods.....

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Bidder's Safety Management System (JC73)

Refer to JSSS 1.5 [*Contractor's Safety Management System*]

~~Confirm~~ Describe how ~~which scheme~~ the Bidder *institutes the Safety Management System* is accredited under.

JC73: Modified in accordance with modification to JSSS1.5

NK5/6: Will modify as commented.

(6) Temporary Works

Refer to JSSS 1.37 [*Design and Management of Temporary Works*].

A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.

NK: JICA added "outline" in the last comment.

OK I have amended

(7) Temporary Facilities on Site

The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)

NK: We consider that the above sentence is independent clause from (6) above and locate in some place.

I have edited as above

(8) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.

(9) Safety Plan for the Works

NK: May the title be Works?

I have edited as above

A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.

(10) Safety Plan for Dangerous Work.

Refer to JSSS 1.22 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [*Definitions and Abbreviations*] and GC 4.1 [*Contractor's General Obligations*].

(11) Permit to Work System

Refer to JSSS 1.23 [*Permit to Work System*]

A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.

コメントの追加 [岡本72]:
Modified in accordance with modification to JSSS1.5

- (12) Safety Measures for Contractor's Equipment
Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]
A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.
- (13) Proposed Health and Safety Incentive Scheme
Refer to JSSS 1.34 [*Health and Safety Incentive Schemes*]
A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.
- (14) Safety Information Sharing and Communications Policy
A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.
A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.
- (15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)
Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]
A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.
- (16) Site Inspection Plan
A description of the methods for Site inspections by the HSO, types of inspection and frequency.
The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work
- (17) Site Security
A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.
The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.
- (18) Policy for Preventing Traffic Accidents
A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.

(19) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(20) Accident Response Plan

Refer to JSSS 1.23.1 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.

~~It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.~~

NK: We consider that the above sentence is independent clause from (19) above and locate in some place.

Deletion is OK

(21) Health Care Plan

Refer to JSSS 1.36 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(22) Fire Response Plan

Refer to JSSS 2.8 [*Fire Prevention*]

Details of the fire prevention services to be provided at the Site.

The Fire Response Plan required by JSSS 2.8 [*Fire Prevention*].

(23) Emergency Response Plan

Refer to JSSS 1.26 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(24) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [*Contractor's Safety Management Activities*]).

(25) Safety Induction Training

Refer to JSSS 1.20 [*Safety Induction Training*]

An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(26) Skill Training

Refer to JSSS 1.21 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.

~~(27) User Training~~

~~Refer to JSSS 1.38 [*User Training*]~~

~~An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.~~

~~(28)~~(27) Legal requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.

[Annex to the](#)

Annex 1.3: Additional Contractor Forms

Attached Forms:

Form JSSS/BSD - Bidder's Safety Declaration

Form JSSS/SAR - Sample Accident Report

loc

Form JSSS/BSO - Bidder's Safety Declaration

[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]

I, [insert name and position of authorised signatory], being duly authorised by [insert name of Bidder/members of joint venture ("JV")] (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSO, hereby declare our commitment to comply with the health and safety requirements of the Contract.

The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.

The Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export (JC74) in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

K74: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standard?

NK5/6: To MD, we would like to ask you to modify as commented.

The Bidder declares that he will mobilise for use upon the Works:

1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.

Please refer to my recommendations and notes in 1.35 and advise me of your requirements.

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability.
3. Fully inform workers about hazards;
4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand.
5. Keep accurate records of work-related injuries and illnesses.

コメントの追加 [伊藤73]: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standard?

6. Perform tests in the workplace, such as air sampling as required by the Project Safety Specification.
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.
9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract.
10. Post injury and illness information and data where workers can see them.
11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site*)

Or

Bidder's Head Office Health and Safety Manager*)

Name:

Date: _____

(*Delete as applicable)

Form JSSS/SAR – Sample Accident Report

[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality) (If casualty(ies) is(are) belonging to subcontractor.) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	
8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	

(above to be inserted before all reports)

FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location of accident occurrence:	
4) Brief background and apparent cause:	
5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
6) Physical damages to the Works, Site and any properties of the third parties	
7) Present medical status of casualty(ies):	
8) Present work status:	
9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
10) Accident Report Submission Date	

SUBSEQUENT REPORT INFORMATION (POST-INVESTIGATION):	
1) Cause(s) of the accident:	
2) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:	
3) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
4) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
5) Other Information:	

Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____	Contractor's Health and Safety Officer (HSO)
Receipt acknowledged by: (name): _____ (sign): _____ Report Receipt Date(s) _____ Time: _____	Engineer

(above to be inserted with detail and signatures at end of each report)

Annex 1.4: Figures and Illustrations (JC75)

JC75: Delete if nothing else other than Fig A 1.4.1

NK5/6: Will delete as commented.

Attached Documents:

~~Fig A1.4.1 — Incorporation of JSSS in Bid and Contract Documents~~ (JC76)

JC76: Move to User Guide 1.3.2

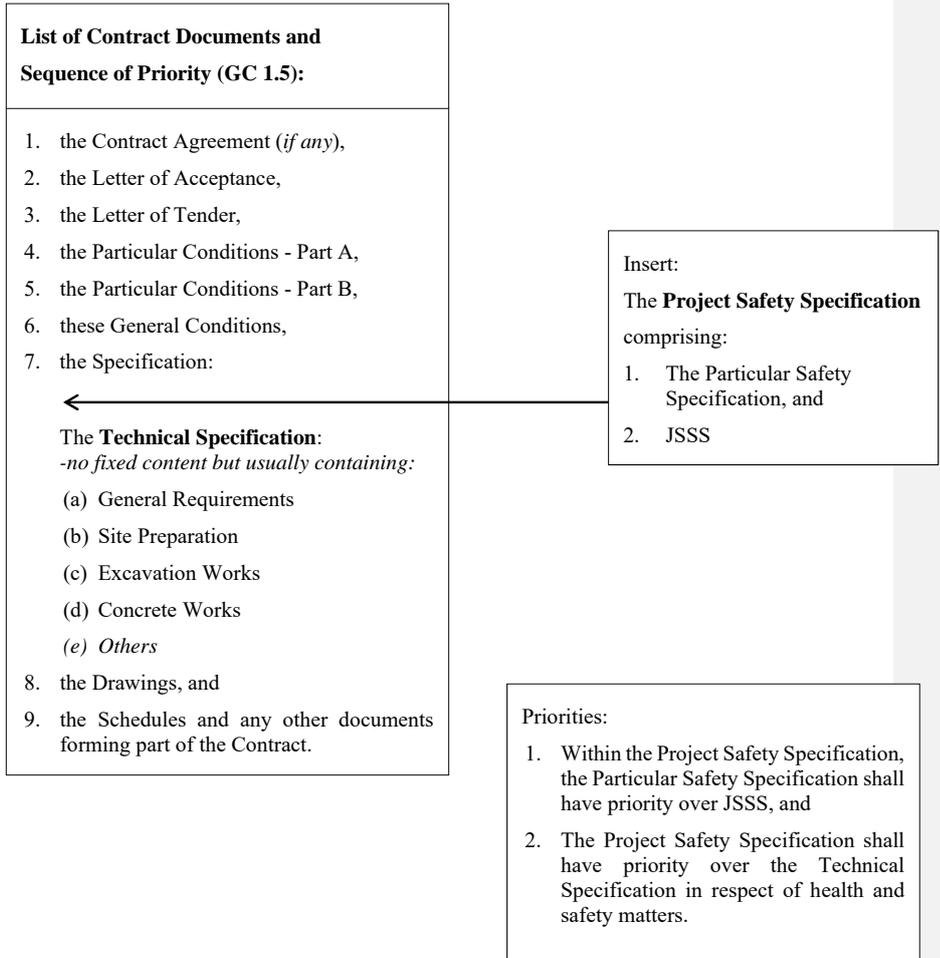
NK5/6: Will move as commented.

コメントの追加 [伊藤74]: Delete if nothing else other than Fig A 1.4.1

コメントの追加 [伊藤75]: Move to User Guide 1.3.2

Fig. A1.4.1

Incorporation of JSSS in Bid and Contract Documents



JICA Standard Safety Specification Preparation Study
Chapter 1. GENERAL REQUIREMENTS (NKR4 for Issue 9 FDR)

2020.5.8 NK R3
2020.5.15 Issue 8
2020.6.8 NK R4 for Issue 9 (FDR)

JSSS in English R3 for Issue 8 (2020/05/08) JICA comments 20200422, NK actions 20200506	JSSS in English Issue 8 (2020/05/15) JICA comments/requests, NK and MD comments and actions	JSSS in English Issue 8 Clean Copy (2020/05/15) and NK R4 for Issue 9 (20200608)
CHAPTER 1 GENERAL REQUIREMENT	CHAPTER 1 GENERAL REQUIREMENT	CHAPTER 1 GENERAL REQUIREMENT
1.1 Safety Declaration	1.1 Safety Declaration	1.1 Safety Declaration
1.2 General Reference Notes	1.2 General Reference Notes	1.2 General Reference Notes
1.3 Incorporation of JSSS into the Contract	1.3 Incorporation of JSSS into the Contract	1.3 Incorporation of JSSS into the Contract
1.4 Compliance with JSSS and Other Regulations	1.4 Compliance with JSSS and Other Regulations	1.4 Compliance with JSSS and Other Regulations
1.5 Contractor's Safety Management System	1.5 Contractor's Safety Management System	1.5 Contractor's Safety Management System
1.6 Checking and Validation of Submissions	1.6 Checking and Validation of Submissions	1.6 Checking and Validation of Submissions
1.7 Contractor's Safety Plans	1.7 Contractor's Safety Plans	1.7 Contractor's Safety Plans
1.8 Risk Assessment	1.8 Risk Assessment	1.8 Risk Assessment
1.9 Contractor's Method Statements	1.9 Contractor's Method Statements	1.9 Contractor's Method Statements
1.10 Engineer's Safety Representative	1.10 Engineer's Safety Representative	1.10 Engineer's Safety Representative
1.11 Safety Compliance Instructions from the Engineer	1.11 Safety Compliance Instructions from the Engineer	1.11 Safety Compliance Instructions from the Engineer
1.12 Health and Safety Officer at the Site (HSO)	1.12 Health and Safety Officer at the Site (HSO)	1.12 Health and Safety Officer at the Site (HSO)
1.13 HSO - Scope of Duties and Authority	1.13 HSO - Scope of Duties and Authority	1.13 HSO - Scope of Duties and Authority
1.1 Safety Declaration	1.1 Safety Declaration	1.1 Safety Declaration
1.2 General Reference Notes	1.2 General Reference Notes	1.2 General Reference Notes
1.3 Incorporation of JSSS into the Contract	1.3 Incorporation of JSSS into the Contract	1.3 Incorporation of JSSS into the Contract
1.4 Compliance with JSSS and Other Regulations	1.4 Compliance with JSSS and Other Regulations	1.4 Compliance with JSSS and Other Regulations
1.5 Contractor's Safety Management System	1.5 Contractor's Safety Management System	1.5 Contractor's Safety Management System
1.6 Checking and Validation of Submissions	1.6 Checking and Validation of Submissions	1.6 Checking and Validation of Submissions
1.7 Contractor's Safety Plans	1.7 Contractor's Safety Plans	1.7 Contractor's Safety Plans
1.8 Risk Assessment	1.8 Risk Assessment	1.8 Risk Assessment
1.9 Contractor's Method Statements	1.9 Contractor's Method Statements	1.9 Contractor's Method Statements
1.10 Engineer's Safety Representative	1.10 Engineer's Safety Representative	1.10 Engineer's Safety Representative
1.11 Safety Compliance Instructions from the Engineer	1.11 Safety Compliance Instructions from the Engineer	1.11 Safety Compliance Instructions from the Engineer
1.12 Health and Safety Officer at the Site (HSO)	1.12 Health and Safety Officer at the Site (HSO)	1.12 Health and Safety Officer at the Site (HSO)
1.13 HSO - Scope of Duties and Authority	1.13 HSO - Scope of Duties and Authority	1.13 HSO - Scope of Duties and Authority
1.14 Procedure for Resuming the Works	1.14 Procedure for Resuming the Works	1.14 Procedure for Resuming the Works
1.15 Contractor's Safety Management Activities	1.15 Contractor's Safety Management Activities	1.15 Contractor's Safety Management Activities
1.16 Joint Site Safety Inspections	1.16 Joint Site Safety Inspections	1.16 Joint Site Safety Inspections
1.17 Compliance Monitoring and Auditing	1.17 Compliance Monitoring and Auditing	1.17 Compliance Monitoring and Auditing
1.18 Proper Placement of Contractor's Personnel	1.18 Proper Placement of Contractor's Personnel	1.18 Proper Placement of Contractor's Personnel
1.19 Safety Training Generally	1.19 Safety Training Generally	1.19 Safety Training Generally
1.20 Safety Induction Training	1.20 Safety Induction Training	1.20 Safety Induction Training
1.21 Skill Training	1.21 Skill Training	1.21 Skill Training
1.22 Dangerous Work	1.22 Dangerous Work	1.22 Dangerous Work
1.23 Permit to Work System	1.23 Permit to Work System	1.23 Permit to Work System
1.24 Accident Response Plan	1.24 Accident Response Plan	1.24 Accident Response Plan
1.25 Measures at the Time Accidents Occur	1.25 Measures at the Time Accidents Occur	1.25 Measures at the Time Accidents Occur
1.26 Emergency Response Plan	1.26 Emergency Response Plan	1.26 Emergency Response Plan
1.27 Contractor's Safety Committee and Regular Safety Meetings	1.27 Contractor's Safety Committee and Regular Safety Meetings	1.27 Contractor's Safety Committee and Regular Safety Meetings
1.28 Engineer's Regular Safety Meetings	1.28 Engineer's Regular Safety Meetings	1.28 Engineer's Regular Safety Meetings
1.29 Project Safety Committee	1.29 Project Safety Committee	1.29 Project Safety Committee
1.30 Health and Safety Coordination with Other Contractors	1.30 Health and Safety Coordination with Other Contractors	1.30 Health and Safety Coordination with Other Contractors

<p>1.31 Safety Statistics 1.32 Safety Reports 1.33 Health and Safety Records 1.34 Health and Safety Incentive Schemes 1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE 1.36 Health Matters 1.37 Design and Management of Temporary Works 1.38 User Training 1.39 Unexploded Ordnance (UXO) ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS Annex 1.1: Definitions and Abbreviations Annex 1.2: Content of Bid Stage Safety Plan Annex 1.3: Additional Contractor Forms Annex 1.4: Figures and Illustrations</p>	<p>1.31 Safety Statistics 1.32 Safety Reports 1.33 Health and Safety Records 1.34 Health and Safety Incentive Schemes 1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE 1.36 Health Matters 1.37 Design and Management of Temporary Works 1.38 Unexploded Ordnance (UXO) ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS Annex 1.1: Definitions and Abbreviations Annex 1.2: Content of Bid Stage Safety Plan Annex 1.3: Additional Contractor Forms</p>	<p>1.31 Safety Statistics 1.32 Safety Reports 1.33 Health and Safety Records 1.34 Health and Safety Incentive Schemes 1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE 1.36 Health Matters 1.37 Design and Management of Temporary Works 1.38 Unexploded Ordnance (UXO) ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS Annex 1.1: Definitions and Abbreviations Annex 1.2: Content of Bid Stage Safety Plan Annex 1.3: Additional Contractor Forms</p>
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JICA acknowledges and gives credit to these sources/publications which include:</p> <p>1) Japanese Acts, Orders and Ordinances including:</p> <ul style="list-style-type: none"> Industrial Safety and Health Act Order for Enforcement of Industrial Safety and Health Act Ordinance on Industrial Safety and Health Safety Ordinance for Cranes Ordinance on Safety and Health of Work under High Pressure Ordinance on Prevention of Anoxia, etc. Ordinance on Prevention of Hazards Due to Dust Explosives Control Act Order for Enforcement of Explosives Control Act Ordinance on Explosives Control <p>2) OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.</p> <p>3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.</p> <p>4) <u>The International Red Cross and Red Crescent Movement (ICRRCM)</u> NK: In 2.9.2 First aid kit: ANSI Z308.1 is referred to. Is the above 4) necessary? True: ANSI is the kit but first aid courses will also be necessary (see added clauses in Section 2.9 and Chapter 10 also). ICRRCM seems to be a convenient and internationally applicable basis.</p> <p>5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)</p>	<p style="background-color: yellow;">I had suggested that copyright and disclaimer clauses would appear to be necessary for JSSS and had further requested that these suggestions be reviewed by JICA legal sources and that confirmation or comment with any revised text be obtained and provided. To date please note that this has not been received, the following remain therefore as good faith suggestions.</p> <p style="color: red;">NK: JICA will review these clause in the review of Final Draft.</p> <p style="text-align: center;">ACKNOWLEDGEMENTS</p> <p>JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:</p> <p>1) Japanese Acts, Orders and Ordinances including:</p> <ul style="list-style-type: none"> Industrial Safety and Health Act Order for Enforcement of Industrial Safety and Health Act Ordinance on Industrial Safety and Health Safety Ordinance for Cranes Ordinance on Safety and Health of Work under High Pressure Ordinance on Prevention of Anoxia, etc. Ordinance on Prevention of Hazards Due to Dust Explosives Control Act Order for Enforcement of Explosives Control Act Ordinance on Explosives Control <p>2) OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.</p> <p>3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.</p> <p>4) <u>The International Red Cross and Red Crescent Movement (ICRRCM)</u> NK: In 2.9.2 First aid kit: ANSI Z308.1 is referred to.—Is the above 4) necessary?— True:—ANSI is the kit but first aid courses will also be necessary (see added clauses in Section 2.9 and Chapter 10 also). 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<p>CHAPTER 1: GENERAL REQUIREMENTS</p> <p>1.1 Safety Declaration</p> <p>1.1.1. Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.</p> <p>1.1.2. A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.</p> <p>NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance1.3 and modify the 1.1.2 as follows:</p> <p>1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Deflation.</p> <p>This is specifically a Bid form to be submitted with the Bid and the wording is correct. Actually, this does require a change to the JICA Standard Bidding Document as included in our earlier draft but JICA do not want to do this.</p> <p>I have modified the User Guide to state this but the same problem will arise, the User Guide requires the Executing Agency to change the Bidding Documents but the SBD prevent this</p> <p>If JICA do not change the SBD this will continue to be a problem and for now all else must therefore be an unsatisfactory compromise</p> <p>NK: NK inquired JICA whether it is not problem to include the form of Safety Declaration in the User Guide because the SBD does not allow addition.</p> <p>NK5/6YH: JICA did not response to the above inquiry. We will proceed as MD proposed.</p> <p>1.2 General Reference Notes</p> <p>1.2.1. For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].</p>	<p>CHAPTER 1: GENERAL REQUIREMENTS</p> <p>1.1 Safety Declaration</p> <p>1.1.1 Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.</p> <p>1.1.2 A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.</p> <p>NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance1.3 and modify the 1.1.2 as follows:</p> <p>1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Deflation.</p> <p>This is specifically a Bid form to be submitted with the Bid and the wording is correct. Actually, this does require a change to the JICA Standard Bidding Document as included in our earlier draft but JICA do not want to do this.</p> <p>I have modified the User Guide to state this but the same problem will arise, the User Guide requires the Executing Agency to change the Bidding Documents but the SBD prevent this</p> <p>If JICA do not change the SBD this will continue to be a problem and for now all else must therefore be an unsatisfactory compromise</p> <p>NK: NK inquired JICA whether it is not problem to include the form of Safety Declaration in the User Guide because the SBD does not allow addition.</p> <p>NK5/6YH: JICA did not response to the above inquiry. We will proceed as MD proposed.</p> <p>NK6/2: We leave 1.1.2 as issue 8</p> <p>1.2 General Reference Notes</p> <p>1.2.1 For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].</p>	<p>CHAPTER 1: GENERAL REQUIREMENTS</p> <p>1.1 Safety Declaration</p> <p>1.1.1 Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.</p> <p>1.1.2 A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration,</p> <p>1.2 General Reference Notes</p> <p>1.2.1 For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].</p>

<p>1.2.2. The following further general reference notes apply to the content of JSSS:</p> <ol style="list-style-type: none"> (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed. (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data. (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible. (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”. (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an equivalent alternative diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract. <p>(6) <u>Unless otherwise stated in JSSS or the context is otherwise clear.</u> (JC1) Any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer’s Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.(JC2)</p> <p>NK: There are many descriptions of “<u>other the Site areas (if any) where the Works are being executed</u>” in JSSS. GC defines as 1.1.6.7 “<u>Site</u>” means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and <u>any other places as may be specified in the Contract</u> as forming part of the Site.(NK のコメントにより、すでに削除済ですが、Q&A は残しました。)</p> <p>May we know the following?</p> <p>Q1: Which places you are assuming as other places?</p> <p>Q2: Are other places specified in the Particular Safety Specification?</p> <p>Other places may be specified in the Contract as forming part of the Site such as offsite storage areas provided by the Employer or Employer’s and Engineer’s compounds and facilities all of which may be remote from the Site but for which the Contractor still has the usual obligations such as care, insurance, maintenance, etc.</p> <p>This is obviously creating difficulty with interpretation, so I have deleted all such reference in JSSS and it now it constantly refers to the Site only. This will also be considered for mention in the User Guide</p>	<p>1.2.2 The following further general reference notes apply to the content of JSSS:</p> <ol style="list-style-type: none"> (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed. (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data. (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible. (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”. 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IC1: In this chapter 1, the expression “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site” which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better:

1. With this additional wording, simply say “the Contractor’s Personnel” or
2. Without this additional wording, every time repeat “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works”

NK5/6YH: NK would like to select the 1 above for JSSS:

IC2: Safety measures are needed not only in the Site

We would like to have advice of NK/MD. The current draft JSSS says:

- A: the Site (very often) and
- B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of “the Site” in JSSS now should be modified as B above.

Therefore, it seems to us wise to add an interpretation of the “Site” in 1.2.2, for example:

“Unless otherwise stated in JSSS or the context is otherwise clear, “Site” used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works”.

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat “the Site and other places (if any) where the Contractor intends to execute the Works” every time. But this is too long, so a bit awkward.

How do you think?

NK5/6YH: NK would like to ask MD to review and select proper wording for JSSS:

(7) Any reference in JSSS to “relevant authority” or “relevant authorities” shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.

(8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for

IC1: In this chapter 1, the expression “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site” which is very long, and would be even longer with our next comment, is sometimes observed.

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Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat “the Site and other places (if any) where the Contractor intends to execute the Works” every time. But this is too long, so a bit awkward.

How do you think?

NK5/6YH: NK would like to ask MD to review and select proper wording for JSSS:

This clause is intended only to ensure that the Employer’s Personnel and any other persons who are entitled to be on the Site are automatically provided with the same health and safety measures that are provided to the Contractor’s Personnel, whenever there is a mention of “Contractor’s Personnel”.

Thereafter there should be no other reference to “Employer’s Personnel and any other persons who are entitled to be on the Site” unless it is for reasons other than the provision of health and safety requirements. I have reviewed other clauses and deleted some, where this is necessary.

For the purpose of this reference only it is not necessary to add any additional wording to “Site”.

I suggest the clause can then be as now suggested by JICA or even left simply as it was.

NK: Modified as JICA added.

(7) Any reference in JSSS to “relevant authority” or “relevant authorities” shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.

(8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular

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<p>Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.</p> <p>Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.</p> <p>1.3 Incorporation of JSSS into the Contract</p> <p>1.3.1 JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The “Project Safety Specification” shall have priority over the other parts of Specification in respect of health and safety matters. Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS, as illustrated in Annex 1.4: [Figures and Illustrations], Fig A1.4.1 [Incorporation of JSSS in Bid and Contract Documents] and as follows: (JC3)</p> <p>1.3.2 JSSS shall be included as a part of the Specification for the Works, which shall be subdivided into two parts namely:</p> <p>1.3.3 The Project Safety Specification (including JSSS), and</p> <p>1.3.4 The Technical Specification</p> <p>1.3.5 The priorities of the document comprising the Specification are as follows:</p> <p>1.3.6 Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS.</p> <p>1.3.7 1.3.1 The “Project Safety Specification” shall have priority over the Technical Specification in respect of health and safety matters.</p> <p>NK: Q1: We think it needs to explain/define “Technical Specification” as same as User Guide 1.3.2 (3) The “Technical Specification” shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safetyEn.</p> <p><i>Yes I agree but the problem again is that “Specification” is already defined in the General Conditions of Contract and any change should be therefore be through a Particular Conditions change but JICA do not want this.</i></p> <p><i>I have added the explanation as above but please note that this is a compromise.</i></p> <p>Q2: Is “other parts of” necessary?</p> <p><i>Thank you and no, it isn't. see above. (Already deleted.)</i></p> <p>JC3: Better to avoid using “Technical specification”</p> <p><i>Fig A1.4.1 moved to User Guide.</i></p> <p>NK5/6: No comment to JC because JICA want to modify as they commented.</p> <p>1.3.8 1.3.2 The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.</p> <p><i>I recommend that the following is necessary (JC4)</i></p> <p><i>The User Guide shall not form a part of the Contract.</i></p>	<p>Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.</p> <p>Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.</p> <p>1.3 Incorporation of JSSS into the Contract</p> <p>1.3.1 JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The “Project Safety Specification” shall have priority over the other parts of the Specification in respect of health and safety matters. Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS, as illustrated in Annex 1.4: [Figures and Illustrations], Fig A1.4.1 [Incorporation of JSSS in Bid and Contract Documents] and as follows: (JC3)</p> <p>1.3.2 JSSS shall be included as a part of the Specification for the Works, which shall be subdivided into two parts namely:</p> <p>1.3.3 The Project Safety Specification (including JSSS), and</p> <p>1.3.4 The Technical Specification</p> <p>1.3.5 The priorities of the document comprising the Specification are as follows:</p> <p>1.3.6 Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS.</p> <p>1.3.7 1.3.1 The “Project Safety Specification” shall have priority over the Technical Specification in respect of health and safety matters.</p> <p>NK: Q1: We think it needs to explain/define “Technical Specification” as same as User Guide 1.3.2 (3) The “Technical Specification” shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safetyEn.</p> <p><i>Yes I agree but the problem again is that “Specification” is already defined in the General Conditions of Contract and any change should be therefore be through a Particular Conditions change but JICA do not want this.</i></p> <p><i>I have added the explanation as above but please note that this is a compromise.</i></p> <p>Q2: Is “other parts of” necessary?</p> <p><i>Thank you and no, it isn't. see above. (Already deleted.)</i></p> <p>JC3: Better to avoid using “Technical specification”</p> <p><i>Fig A1.4.1 moved to User Guide.</i></p> <p>NK5/6: No comment to JC because JICA want to modify as they commented.</p> <p><i>I am informed that my comment is not required on “blue” shaded items, therefore none is provided.</i></p> <p><i>Suggested editing.</i></p> <p>NK6/2: Confirmed.</p> <p>1.3.8 1.3.2 The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.</p> <p><i>I recommend that the following is necessary (JC4)</i></p> <p><i>The User Guide shall not form a part of the Contract.</i></p> <p>NK: : MD proposed the addition above. NK considers it is not necessary.</p> <p>JC4: Not necessary.</p> <p>NK5/6: Deleted as commented.</p>	<p>June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.</p> <p>Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.</p> <p>1.3 Incorporation of JSSS into the Contract</p> <p>1.3.1 JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The “Project Safety Specification” shall have priority over the other parts of the Specification in respect of health and safety matters. 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NK: MD proposed the addition above. NK considers it is not necessary.

JC4: Not necessary.

NK5/6: Deleted as commented.

1.4 Compliance with JSSS and Other Regulations

- 1.4.1. JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.
- 1.4.2. JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.
- 1.4.3. The Contractor shall comply fully with the requirements of ~~JSSS Project as supplemented and modified by the Particular~~ Safety Specification.
- 1.4.4. ~~Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer's Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.(JC5)~~

JC5: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.

NK5/6: Will modify as commented.

1.4.5. ~~Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply.-(JC6)~~

NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?

I am informed that my comment is not required on "blue" shaded items, therefore none is provided.

Notes to NK: the statement that the User Guide does not form a part of the Contract is important and intended to limit risk for JICA.

The deletion is shaded in blue so I must not comment.

The biggest user of JSSS is actually the Contractor, and if it is published at the same time as the User Guide on the same JICA website the contractor will refer to it and this could create future problems.

Future claims from contractors can be predicted on this for example that the Bid documents have not been prepared properly according to the User Guide or that the full information (for example required by User Guide clause 1.3.3) has been not been provided or has been withheld. Whether such claims are insupportable under the contract or not, they must still be defended and this takes time and money usually which JICA pay.

JSSS 1.3.4 was intended to very simply prevent this but it has been deleted and I have been asked not to comment, so what can I do?

After further consideration on this subject and as advised in my last comment of Annex 1, I also suggest that it is better to rename the "User Guide", for example as the "Guide for Use of Executing Agencies", it is more correct and may reduce the risk of claim even though it will not solve this problem fully.

NK6/2: We proposed the title of User Guide as "Guide for Use of Executing Agencies".

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- 1.4.4 ~~Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer's Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.(JC5)~~

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NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

NK6/2: Confirmed.

1.4.5 ~~Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply.-(JC6)~~

NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?

It is intended to be for the situation where JSSS has been agreed to be use, but it is lacking in some areas in which case we use the Laws.

1.4 Compliance with JSSS and Other Regulations

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- 1.4.3 The Contractor shall comply fully with the requirements of Project Safety Specification.

It is intended to be for the situation where JSSS has been agreed to be used, but it is lacking in some areas in which case we use the Laws.

JC6: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6.

NK5/6: Will delete as commented.

1.4.6. If, for the particular part of the Works, the Project Safety Specification does not contain safety requirements and there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable safety measures in the Safety Plans internationally acceptable safety regulations for the Engineer's consent. These may contain proposing application of internationally recognised standard or regulation.

NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?

It is intended for use where we have dropped back to the Laws but there are no particular Laws available.

I have no objection if both are deleted.

NK: NK propose to combine 1.4.5 and 1.4.6 below.

If there are no or insufficient safety provisions in the Laws of the Country and in JSSS and the Particular Safety Specification for the particular part of the Works, and if the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent. (subject to MD's review.)

There is no JICA comment to the above.

1.4.7. Specified Standards and Regulations (JC7)

JC7: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding, right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.

NK5/6: YH think these regulations do not include the law. To MD, please review this comment and sentences.

(1) Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date. (JC8)

JC8: Better to add this in the main text of JSSS as mentioned in A1.1.5

NK5/6: YH think these regulations do not include the law. We would like to ask MD to review this.

JC6: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6

NK5/6: Will delete as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

NK6/2: Confirmed.

1.4.6 If, for the particular parts of the Works, the Project Safety Specification does not contain safety requirements and there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable safety measures in the Safety Plans internationally acceptable safety regulations for the Engineer's consent. These may contain proposing application of internationally recognised standard or regulation.

NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?

It is intended for use where we have dropped back to the Laws but there are no particular Laws available.

I have no objection if both are deleted.

NK: NK propose to combine 1.4.5 and 1.4.6 below.

If there are no or insufficient safety provisions in the Laws of the Country and in JSSS and the Particular Safety Specification for the particular part of the Works, and if the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent. (subject to MD's review.)

There is no JICA comment to the above.

There is no JICA comment on this.

Your suggested combined clause is suitable, I have edited as follows:

If there are no or insufficient safety provisions in the Laws of the Country, in JSSS or in the Particular Safety Specification for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent.

NK6/2: We adopted the MD's reviewed sentence above.

1.4.7 Specified Standards and Regulations (JC7)

JC7: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.

NK5/6: YH think these regulations do not include the law. To MD, please review this comment and sentences.

For example, OSHA requirements to which you have referred in JSSS, are actually their regulations not standards.

These regulations are intended for the US and are enforceable only there under their rule of law.

Using OSHA does not mean or imply that you are adopting related US laws or rules for enforcement.

To avoid any legal association, please refer to subclause (4) below and also throughout the other "technical" chapters of JSSS where reference is made to OSHA by using the phrase to the "technical requirements of ..."

This is very much a compromise but something like this is necessary to support your choice of OSHA as a reference basis.

My own opinion is that OSHA will not form a part of the applicable Laws or the Laws of the Country with which the Contractor is to comply under the Contract (see GC 1.13 and 1.3.7 respectively), however I recommend that JICA should check this opinion to support their choice of OSHA, HSE etc.

Please advise of any further requirements or if you require any change.

NK: We agree to MD's opinion and have no request so far.

1.4.4 If there are no or insufficient safety provisions in the Laws of the Country, in JSSS or in the Particular Safety Specification for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent.

1.4.5 Specified Standards and Regulations

<p>(2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.</p> <p>(2)(3) <u>Application of detailed parts of standard or regulation specified in JSSS may be waived at a formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.</u> (JC9)</p> <p>IC9: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of "waiver" should be provided.</p> <p>NK5/6: Will modify as commented.</p> <p>(3)(4) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.</p> <p>1.4.8. Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".</p> <p>1.4.9. If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:</p>	<p>(1) <u>Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date.</u> (JC8)</p> <p>IC8: Better to add this in the main text of JSSS as mentioned in A1.1.5</p> <p>NK5/6: YH think these regulations do not include the law. We would like to ask MD to review this.</p> <p>There appears to be no problem with transferring the above clause to here but it needs deleting in the Annex to avoid duplication.</p> <p>NK6/2: A1.1.5 is deleted as specified in (1) here.</p> <p>(2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.</p> <p>(2)(3) <u>Application of detailed parts of any standards or regulations specified in JSSS may be waived at the formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.</u> (JC9)</p> <p>IC9: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of "waiver" should be provided.</p> <p>NK5/6: Will modify as commented.</p> <p>I am informed that my comment is not required on "blue" shaded items, therefore none is provided</p> <p>Please refer to editing as shown in red</p> <p>NK6/2: Confirmed.</p> <p>(3)(4) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.</p> <p>1.4.8 Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".</p> <p>1.4.9 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:</p> <p>(1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.</p>	<p>(1) Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date.</p> <p>(2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.</p> <p>(3) Application of detailed parts of any standards or regulations specified in JSSS may be waived at the formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.</p> <p>(4) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.</p> <p>1.4.6 Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".</p> <p>1.4.7 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. 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<p>(1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.</p> <p>(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear. (JC10)</p> <p>JC10: We don't really understand the meaning of this.</p> <p>NK5/6: YH considers this cannot be understood. To MD, please review this sentence.</p> <p>1.4.10. Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion <u>and Defect Notification Period.</u> during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification. (JC11)</p> <p>NK: We consider that this phrase may be changed to "and the Defects Notification Period"? (Though the phrase is correctly expressed.)</p> <p>No, your suggested change would not be correct this has been especially drafted following JICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).</p> <p>The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer's property except as stated in this clause.</p> <p>NK: we agree to leave this as specified.</p> <p>JC11: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.</p> <p>With this modification, Particular Safety Specification in User Guide will not be necessary any more.</p> <p>NK5/6: Will modify as commented.</p>	<p>(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear. (JC10)</p> <p>JC10: We don't really understand the meaning of this.</p> <p>NK5/6: YH considers this cannot be understood. To MD, please review this sentence.</p> <p>Please clarify the meaning your query as I cannot clearly understand.</p> <p>Similar to GC 1.5, the documents in JSSS are basically to be taken as mutually explanatory of one another however the priority of the documents should be stated, in order to resolve any future ambiguity or discrepancy. For this reason, I have suggested that for any interpretation difficulty:</p> <p>between Chapter 1 (which is General) and all other chapters, then Chapter 1 will prevail and apply</p> <p>between Chapters 2 to 6 (which are also general) and all others (Chapters 7 to 10 and future), Chapters 2 to 6 will apply</p> <p>Please advise of any change that you require.</p> <p>NK6/2: I understood by MD's explanation. No change is required.</p> <p>1.4.10 Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion <u>and Defects Notification Period.</u> during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification. (JC11)</p> <p>NK: We consider that this phrase may be changed to "and the Defects Notification Period"? (Though the phrase is correctly expressed.)</p> <p>No, your suggested change would not be correct this has been especially drafted following JICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).</p> <p>The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer's property except as stated in this clause.</p> <p>NK: we agree to leave this as specified.</p> <p>JC11: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.</p> <p>With this modification, Particular Safety Specification in User Guide will not be necessary any more.</p> <p>NK5/6: Will modify as commented.</p> <p><i>I am informed that my comment is not required on "blue" items but am a little confused as NK are requested to redraft.</i></p> <p>Notes for NK:</p> <p><i>The following information is given for NK use.</i></p> <p><i>I completely understood the JICA intentions during the earlier discussion in January which is why the above advice (highlighted in green) was given.</i></p> <p><i>The Contractor must have already completed the Works before commencement of the DNP and they have already been taken over, occupied and put into use by the Employer.</i></p> <p><i>The Contractor of course has a contractual obligation to take care of the health and safety of his employees when they are completing any work which is outstanding or executing</i></p>	<p>(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear.</p> <p>1.4.8 The Contractor shall comply with the requirements of JSSS throughout the Time for Completion and Defects Notification Period. The Contractor's obligations to provide temporary services and facilities finish at the end of the Time for Completion unless otherwise specified in the Particular Safety Specification.</p>
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<p>1.4.11. The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.</p> <p>1.5 Contractor's Safety Management System</p> <p>1.5.1. The Contractor shall institute a health and safety management system in accordance with OHSAS 18001 or ISO 45001:2018. (JC11a) <u>The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.</u></p> <p>JC11a: OHSAS does not exist any more? Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.</p> <p>NK5/6: OHSAS18001 will be expired on March 11, 2012. To MD, do we make note till the expiry date? NK agreed to delete the year.</p>	<p>any work required to remedy defects during the DNP and it is not necessary to state this in JSSS.</p> <p>However, the Contractor has no obligation to continue to provide the majority of the facilities or services of JSSS during the DNP as the Works are completed, handed over, occupied and used by the Employer and most if not all temporary facilities will already have been removed.</p> <p>To state that "the Contractor shall comply with the requirements of JSSS throughout the DNP" is not correct.</p> <p>The Contractor for example has no obligation to provide ongoing services and facilities during the DNP, meaning no clinic, ambulance, medical facilities, fire-fighting, support to Employer and Engineer, spare PPE, training, scaffolding, contractor's equipment and temporary works general availability etc etc, all of which are "requirements" of JSSS.</p> <p>I am concerned that this will be misunderstood or even abused by some employers and consultants and that because this is so stated the contractor will be requested to provide services and facilities that he is no longer responsible for.</p> <p>If any facilities are particularly required (e.g. clinic, ambulance, medical facilities, fire-fighting, spare PPE, training etc this should be clearly stated in the Particular Safety Specification so that the Contractor is aware and so that it can be included in his bid.</p> <p>The added text is not therefore advisable.</p> <p>NK: As explained in User Guide, we revise as follows:</p> <p>NK6/2: The issues discussed by JICA and MD are different how to specify continued compliance to requirements during the DNP stipulated in JSSS.</p> <p>JICA want to specify to continue for the Contractor to take safety measures for workers during the DNP.</p> <p>MD wants specify requirements for facilities and services such as medical services for the Employer during the DNP.</p> <p>We propose to revise 1.4.10 as shown below.</p> <p>1.4.10 Unless otherwise specified in the Particular Safety Specification, The Contractor shall comply with the requirements of JSSS throughout the Time for Completion and Defects Notification Period.</p> <p>The Contractor's obligations to provide temporary services and facilities finish at the end of the Time for Completion unless otherwise specified in the Particular Safety Specification.</p> <p>1.4.11 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.</p> <p>1.5 Contractor's Safety Management System</p> <p>1.5.1 The Contractor shall institute a health and safety management system in accordance with OHSAS 18001 or ISO 45001:2018. (JC11a) <u>The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.</u></p> <p>JC11a: OHSAS does not exist any more? Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.</p> <p>NK5/6: OHSAS18001 will be expired on March 11, 2012. To MD, do we make note till the expiry date? NK agreed to delete the year.</p> <p>1.5.2 The Contractor shall state the applicable standard in the Contractor's Safety Plan. (JC12)</p> <p>JC12: If delete OHSAS above, delete accordingly.</p> <p>NK5/6: To MD, please review this.</p>	<p>1.4.9 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.</p> <p>1.5 Contractor's Safety Management System</p> <p>1.5.1 The Contractor shall institute a health and safety management system in accordance with ISO 45001. The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation</p>
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1.5.2. ~~The Contractor shall state the applicable standard in the Contractor's Safety Plan. (JC12)~~

~~JC12: If delete OHSAS above, delete accordingly.~~

~~NK5/6: To MD, please review this.~~

1.5.3. ~~The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation. Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17. (JC13)~~

~~JC13: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.~~

~~NK5/6: Will modify as commented.~~

1.5.4. The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent. –

NK: JICA deleted 1.5.3 in the last comment because JICA wants for the Contractor to institute and operate HS management system but not request submission of certification. (actually and practically certificate is not much important). We think 1.5.3 should be deleted.

I have deleted the requirement with the Bid (see Annex 1.3), however if the contractor is to comply with a scheme how does the Engineer know which scheme and how to verify compliance?

It has no little or no meaning otherwise.

NK: JICA intention is only to apply the safety management system excluding the certification and auditing by the certification body. Therefore, 1.5.3 is considered not request certification. To JICA, is this understanding correct?この考え方で正しいでしょうか?

1.6 Checking and Validation of Submissions

1.6.1. In accordance with GC 4.9 [*Quality Assurance*] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination (JC13a), design and supervision staff and any independent checkers as appropriate.

NK: Is this correct that we think 1.6.1 is added in relation with design of TW, etc.?

Not only TW it also applies to his Safety Plans, Method statements, any shop or working drawings. In fact any Contractor submissions are stated.

~~JC13a: coordinator~~

~~NK5/6: We think so.~~

~~1.6.2. For the purposes of interpretation for JSSS, the final paragraph of GC 1.8 [Care and Supply of Documents] shall not apply to submissions of the~~

1.5.3 ~~The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation. Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17. (JC13)~~

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I am informed that my comment is not required on "blue" shaded items, therefore none is provided

NK, please can you advise me of the text that you want to insert here and I will edit this as necessary.

NK: No addition.

1.6 Checking and Validation of Submissions

1.6.1 In accordance with GC 4.9 [*Quality Assurance*] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination (JC13a), design and supervision staff and any independent checkers as appropriate.

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~~NK5/6: We think so.~~

~~1.6.2 For the purposes of interpretation for JSSS, the final paragraph of GC 1.8 [Care and Supply of Documents] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible. (JC14)~~

1.5.2 Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17.

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<p>Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible. (JC14)</p> <p>NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.</p> <p>This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. I believe that with the increased amount of submissions such as method statements, safety plans and temporary works details, there is an increased possibility that the Engineer could comment but chooses not to or even overlooks or misses, errors. If this happens there is the risk of avoiding responsibility if an error or defect (what is this?) should have been discovered. (JC14)</p> <p>It is a strange but potentially onerous obligation that is inconsistent with GC 4.9 even if 1.8 does not state the consequences: GC 1.8 states: "If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect."</p> <p>JC14: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1).</p> <p>Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor.</p> <p>We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".</p> <p>NK5/6: Will modify as commented.</p> <p>1.7 Contractor's Safety Plans</p> <p>1.7.1. The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>1.7.2. The Safety Plans shall set out or refer to all the health and safety requirements:</p> <ol style="list-style-type: none"> (1) that are stated in JSSS; (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site. (JC15) <p>JC15: See 1.2.2 (6).</p> <p>NK5/6: No comment.</p>	<p>NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.</p> <p>This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. 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This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor.</p> <p>We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".</p> <p>NK5/6: Will modify as commented.</p> <p>NK, please can you advise me of the text that you want to insert here and I will edit the spelling grammar of this as necessary.</p> <p>NK6/6: No addition is made.</p> <p>1.7 Contractor's Safety Plans</p> <p>1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:</p> <ol style="list-style-type: none"> (1) that are stated in JSSS; (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site. (JC15) <p>JC15: See 1.2.2 (6).</p> <p>NK5/6: No comment.</p> <p>This is connected with the provision of health and safety measures as referred to in 1.2.2 (6) and can be deleted to be compatible.</p> <p>1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:</p> <ol style="list-style-type: none"> (1) Bid Stage Safety Plan (Outline Overall Safety Plan). (2) Commencement Stage Safety Plan (Updated Overall Bid Stage Safety Plan) (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works 	<p>1.7 Contractor's Safety Plans</p> <p>1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:</p> <ol style="list-style-type: none"> (1) that are stated in JSSS; (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel. <p>1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:</p> <ol style="list-style-type: none"> (1) Bid Stage Safety Plan (Outline Overall Safety Plan). 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<p>1.7.3. The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:</p> <ol style="list-style-type: none"> (1) Bid Stage Safety Plan (Outline Overall Safety Plan). (2) Commencement Stage Safety Plan (Updated Overall Bid Stage Safety Plan) (3) Particular Safety Plans (Updated) separate plans if necessary for particular parts of the Works <p>NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.</p> <p>I don't quite understand your comment, the Bid Stage Plan is followed by an updated plan after Commencement but this is still an early plan and the same plan (or parts of it) will probably require to be further revised and updated as the detail of works develop and before any parts of the works commence.</p> <p>NK: We understand your meaning.</p> <p>1.7.4. The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level. throughout the Time for Completion of the Works.</p> <p>1.7.5. Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility. and at any time throughout the Time for Completion of the Works.</p> <p>NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?</p> <p>Yes, thank you, that is true, but better to delete the phrase rather than add.</p> <p>1.7.6. Bid Stage Safety Plan:</p> <ol style="list-style-type: none"> (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [<i>Content of Bid Stage Safety Plan</i>]. (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated. <p>1.7.7. Commencement Stage Safety Plan</p> <ol style="list-style-type: none"> (1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site, (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works. 	<p>NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.</p> <p>I don't quite understand your comment, the Bid Stage Plan is followed by an updated plan after Commencement but this is still an early plan and the same plan (or parts of it) will probably require to be further revised and updated as the detail of works develop and before any parts of the works commence.</p> <p>NK: We understand your meaning.</p> <p>1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level. throughout the Time for Completion of the Works.</p> <p>1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility. and at any time throughout the Time for Completion of the Works.</p> <p>NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?</p> <p>Yes thank you, that is true, but better to delete the phrase rather than add.</p> <p>1.7.6 Bid Stage Safety Plan</p> <ol style="list-style-type: none"> (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [<i>Content of Bid Stage Safety Plan</i>]. 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(3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract. <p>NK: Is it not necessary to specify to review Commencement Stage SP?</p> <p>(6) Can we consider Commencement Stage SP is not be reviewed and the Engineer may review it and give comment in accordance with GC 1.8 Care and Supply of Documents though Japanese draft is specified to review it within 14 days?</p> <p>Fair comment: I had modified the following clause 1.7.8 to deal with Particular Safety Plans. The Commencement Stage Safety plan is another contract stage submission subject to the same procedures so I have added it there.</p>	<p>1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level.</p> <p>1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility.</p> <p>1.7.6 Bid Stage Safety Plan</p> <ol style="list-style-type: none"> (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [<i>Content of Bid Stage Safety Plan</i>]. 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Particular Safety Plans</p> <p>(1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.</p> <p>1.7.9. Procedures for Submission and Review</p> <p>(1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works. (JC16)</p> <p><i>JC16: Should it be "of the Works or any part thereof"?</i></p> <p><i>NK5/6: We agreed the above modification.</i></p> <p>(2) The Contractor shall submit:</p> <p>(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].</p> <p>(b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.</p> <p>NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?</p> <p><i>I have changed this</i></p> <p>Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP.</p> <p>We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan</p> <p><i>I disagree; many of the items mentioned in Issue 6 are to be included in the Method statement and all other items are included in Annex 1.3 all of which will be progressively developed. There is no need to include additional information here.</i></p> <p>NK: understand.</p> <p>(3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:</p> <p>(a) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent</p>	<p><i>Please also note the above correction to the submission date of the plan which should be twenty-eight (28) days after the Commencement Date.</i></p> <p>1.7.8 Particular Safety Plans</p> <p>(1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.</p> <p>1.7.9 Procedures for Submission and Review</p> <p>(1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works. (JC16)</p> <p><i>JC16: Should it be "of the Works or any part thereof"?</i></p> <p><i>NK5/6: We agreed the above modification.</i></p> <p><i>Yes for consistency that is better but I suggest to further consistency please use: "the Works or any part of the Works."</i></p> <p>(2) The Contractor shall submit:</p> <p>(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].</p> <p>(b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.</p> <p>NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?</p> <p><i>I have changed this</i></p> <p>Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP.</p> <p>We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan</p> <p><i>I disagree; many of the items mentioned in Issue 6 are to be included in the Method statement and all other items are included in Annex 1.3 all of which will be progressively developed. There is no need to include additional information here.</i></p> <p>NK: understand.</p> <p>(3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:</p> <p>(a) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;</p> <p>(b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and</p>	<p>1.7.8 Particular Safety Plans</p> <p>(1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.</p> <p>1.7.9 Procedures for Submission and Review</p> <p>(1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the Works or any part of the Works.</p> <p>(2) The Contractor shall submit:</p> <p>(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].</p> <p>(b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.</p> <p>(3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:</p> <p>(a) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;</p> <p>(b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance</p>
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<p>to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;</p> <p>(b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.</p> <p>1.7.10. The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p> <p>1.7.11. Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.</p> <p>1.7.12. The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.</p> <p>1.8 Risk Assessment</p> <p>1.8.1. In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.</p> <p>1.8.2. The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.</p> <p>1.8.3. The procedural flow of risk assessment shall be as follows.</p> <p>(1) Identifying hazards.</p> <p>(2) Evaluating risks.</p> <p>(3) Determining measures of risk reduction or elimination.</p> <p>1.8.4. The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:</p> <p>(1) Removal of hazards such as eliminating dangerous methods of construction.</p> <p>(2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.</p> <p>(3) Engineering measures.</p> <p>(4) Management measures including improving skills with additional training.</p> <p>(5) Use of PPE.</p> <p>1.9 Contractor's Method Statements</p>	<p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. 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I suggest that the full expression should remain.</i></p> <p>1.8.3 The procedural flow of risk assessment shall be as follows.</p> <p>(1) Identifying hazards.</p> <p>(2) Evaluating risks.</p> <p>(3) Determining measures of risk reduction or elimination.</p> <p>1.8.4 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:</p> <p>(1) Removal of hazards such as eliminating dangerous methods of construction.</p> <p>(2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.</p> <p>(3) Engineering measures.</p> <p>(4) Management measures including improving skills with additional training.</p> <p>(5) Use of PPE.</p> <p>NK: May we know what "improved PPE" mean?</p> <p>Deleted</p> <p>1.9 Contractor's Method Statements</p>	<p>with the Safety Plan subject to complying with his other obligations under the Contract; and</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. 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Method Statements shall <u>be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and (JC17)</u> include details of all Permanent Works and Temporary Works with supporting documents such as:</p> <p>JC17: Better to have a linkage with the risk assessment.</p> <p>NK5/6: Will modify as commented.</p> <p>(1) Studies, investigations and designs.</p> <p>NK: We suggest to change to “Studies, investigations, and designs”?</p> <p>Changed</p> <p>(2) Structural calculations and any other calculations.</p> <p>(3) Specifications and technical details.</p> <p>(4) Proposed construction procedure, sequence and method.</p> <p>(5) Construction resources including <u>superintendents, workers, operation leaders</u> and Contractor’s Equipment.</p> <p>NK: We consider “worker” will be used because it is used in other Chapter though FIDIC uses “labour”.</p> <p>OK I have changed anyway but it now needs wider wording, labour is also used in FIDIC</p> <p>(6) Inspection and monitoring plan.</p> <p>1.9.3. The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.</p> <p>1.9.4. Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer’s request.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:</p> <p>(1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.</p> <p>(2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.</p> <p>(3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. 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<p>Contractor shall rectify any non-compliance and resubmit to the Engineer.</p> <p>(2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.</p> <p>(3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.</p> <p>(4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.</p> <p>(5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.</p> <p>NK: We consider “for his information” can be deleted because this phrase is not used for Safety Plan though Issue 6 used it.</p> <p>Changed.</p> <p>1.10 Engineer’s Safety Representative</p> <p>1.10.1. Unless otherwise specified in the Particular Safety Specification, the Engineer may delegate his power and authority to any of his assistant’s delegated representative at the Site <u>who (JC18)</u> shall act as the Engineer’s health and safety representative for the purpose of complying with any health and safety obligations under JSSS.</p> <p>JC18: Particular Safety Specification is not necessary with this modification.</p> <p>NK5/6: Will modify as commented.</p> <p>1.10.2. The terms of the appointment shall be in accordance with GC 3.2 [Delegation by the Engineer].</p> <p>1.10.3. Whenever the term “Engineer” is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.</p> <p>1.11 Safety Compliance Instructions from the Engineer</p> <p>1.11.1. Without affecting or diminishing the Contractor’s responsibility under GC 4.1 [Contractor’s General Obligations] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor’s performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.</p>	<p>Contractor shall rectify such non-compliance. 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(JC19)</p> <p>JC19: The sentence is not complete???</p> <p>NK5/6: To Md, please review the sentence.</p> <p>1.11.4. The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.</p> <p>1.12 Health and Safety Officer at the Site (HSO)</p> <p>1.12.1. For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7[<i>Health and Safety</i>], shall be construed as "Health and Safety Officer at the Site".</p> <p>NK: HSO is defined in A1.1.1(3), so can 1.12.1 be deleted?</p> <p>No. This is necessary to correspond to the definition.</p> <p>Please note that this is a compromise. PC change would have been preferable.</p> <p>1.12.2. Requirements for the HSO:</p> <ol style="list-style-type: none"> (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date. (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [<i>Contractor's Personnel</i>], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent. (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [<i>Health and Safety</i>]. (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer. (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated. (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the 	<p>the Engineer obtained the Engineer's consent and implemented such measures to ensure that no such accident can reoccur. (JC19).</p> <p>JC19: The sentence is not complete???</p> <p>NK5/6: To Md, please review the sentence.</p> <p>Thank you, I suggest editing as follows:</p> <p>1.11.4 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [Suspension of Work] and not allow work to recommence until such time as:</p> <ol style="list-style-type: none"> (1) the cause has been investigated and established by the Contractor; (2) corrective and preventive measures have been formulated by the Contractor and proposed to the Engineer; (3) the Engineer's consent has been obtained for such measures; and (4) the measures have been implemented to ensure that no such accident can reoccur. <p>1.11.5 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.</p> <p>1.12 Health and Safety Officer at the Site (HSO)</p> <p>1.12.1 For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7[<i>Health and Safety</i>], shall be construed as "Health and Safety Officer at the Site".</p> <p>NK: HSO is defined in A1.1.1(3), so can 1.12.1 be deleted?</p> <p>No. This is necessary to correspond to the definition.</p> <p>Please note that this is a compromise. PC change would have been preferable.</p> <p>1.12.2 Requirements for the HSO:</p> <ol style="list-style-type: none"> (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date. (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [<i>Contractor's Personnel</i>], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent. (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [<i>Health and Safety</i>]. (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer. (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated. (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the 	<p>1.11.3 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [<i>Suspension of Work</i>] and not allow work to recommence until such time as:</p> <ol style="list-style-type: none"> (1) the cause has been investigated and established by the Contractor; (2) corrective and preventive measures have been formulated by the Contractor and proposed to the Engineer; (3) the Engineer's consent has been obtained for such measures; and (4) the measures have been implemented to ensure that no such accident can reoccur. <p>1.11.4 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.</p> <p>1.12 Health and Safety Officer at the Site (HSO)</p> <p>1.12.1 For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7[<i>Health and Safety</i>], shall be construed as "Health and Safety Officer at the Site".</p> <p>1.12.2 Requirements for the HSO:</p> <ol style="list-style-type: none"> (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date. (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [<i>Contractor's Personnel</i>], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent. (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [<i>Health and Safety</i>]. (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer. (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country)
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Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety].

- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) ~~Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management. (JC20)~~

Where there is no legal requirement under the Laws of the Country or unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as that International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK ~~Level 6 Diploma level~~ or Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) in USA or an equivalent alternative internationally recognised qualification covering health and safety and risk management.

JC20: To NK, Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia)

NK5/6: We rechecked the qualification of HSO required in the world and tabulated below:

No	Country	Law/Regulation	Title	Requirements	Work Experience	
1	Japan	Ordinance on Industrial Safety and Health	Safety Officer	1. Trained personnel for 9 hrs training course, or other courses	University or technical college	in S&H 2 years
					science course	4 years
					Senior high school science course	in S&H 4 years
		Others	in S&H 6 years			
		Others	in S&H 7 years			
		2. Industrial safety consultants.				
2	USA	OSHA APPENDIX C TO §1926.65 COMPLIANCE GUIDELINES 1. Occupational Safety and Health Program.	e.g. Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) The Safety and Health Manager	CSP 1) Bachelor's degree, and 2) BCSP Qualified Credential (e.g. NEBOSH National or International Diploma in Occupational Health and Safety) 3) CSP examination	4 years of safety experience	

Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.

- (7) ~~Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management. (JC20)~~

~~Where there is no legal requirement under the Laws of the Country or unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as that International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK Level 6 Diploma level or Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) in USA or an equivalent alternative internationally recognised qualification covering health and safety and risk management.~~

No problem with the above, I suggest editing as follows:

Where there is no legal requirement under the Laws of the Country and unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as:

- (a) an International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK; or
- (b) Certification as a Certified Safety Professionals (CSP) by the Board of Certified Safety Professionals (BCSP) in USA; or
- (c) an equivalent alternative internationally recognised qualification covering health and safety and risk management.

JC20: To NK, Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia)

NK5/6: We rechecked the qualification of HSO required in the world and tabulated below:

No	Country	Law/Regulation	Title	Requirements	Work Experience	
1	Japan	Ordinance on Industrial Safety and Health	Safety Officer	1. Trained personnel for 9 hrs training course, or other courses	University or technical college	in S&H 2 years
					science course	4 years
					Senior high school science course	in S&H 4 years
		Others	in S&H 6 years			
		Others	in S&H 7 years			
		2. Industrial safety consultants.				
2	USA	OSHA APPENDIX C TO §1926.65 COMPLIANCE GUIDELINES	e.g. Certified Safety Professionals (CSP) by Board of Certified Safety	CSP 1) Bachelor's degree, and 2) BCSP Qualified Credential (e.g. NEBOSH National or International Diploma in Occupational Health and Safety) 3) CSP examination	4 years of safety experience	

shall be licensed or registered in the Country and perform such duties as are legally mandated.

- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) Where there is no legal requirement under the Laws of the Country and unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as:
 - (a) an International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK; or
 - (b) Certification as a Certified Safety Professionals (CSP) by the Board of Certified Safety Professionals (BCSP) in USA; or
 - (c) an equivalent alternative internationally recognised qualification covering health and safety and risk management.

		U.S. Army Corps of Engineers, EM-385	shall be the CSP.		
3	UK	Internet Information	Environmental Health and safety manager	1) Bachelor's degree in Safety Engineering, etc. 2) National/International Diploma 1. NEBOSH National Diploma in Occupational Health and Safety. 2. British Safety Council Level 6 Diploma in Occupational Safety and Health., etc.	5 years related experience in environmental health and safety.
4	Singapore	Regulations	1) Representative of the Contractor 2) Safety Supervisor	1) Training and exam. of 3 days 2) Training of 10 hrs per week for 6 months (60 hrs)	
5	India	Regulation	1) Safety Officer 2) Safety Staff	1) Graduation of safety course more than 2 years in college 2) Training course	
6	Thailand	Regulation	1) Head Man Level 2) Technique Level 3) High Technique Level 4) Professional Level 5) Management Level	1) 12 hr training 2) Ditto 3) 180 hr training 4) Graduation of Occupational health bachelor course, or person trained & passed exam., or safety officer of 5 years experience and trained & passed exam. 5) 12 hr training	
7	Indonesia	Regulation	Occupational Health and safety Expert	10 days (90 hrs) training	
8	Vietnam	Regulation	Not found yet.		

NK: We found each country has its regulation regarding qualification of Safety Officer. Japanese one is almost same level as Head Man Level and Technique Level in Thailand.

(2) In Japanese regulation, the Project Manger shall be a General Safety and Health Manager and supervise the Safety officer(s). Japanese contractors may not assign Japanese engineers directly as HSO though they have experience and knowledge of safety management in construction sites and also ability to manage safety in ODA projects. However, they have no academic certificates in Japan and also international training certificates. The Japanese contractors who work for ODA projects may employ safety specialist who having qualification required in the contract or make their engineers be certified by international organizations such as NEBOSH and BCSP. The contractor's engineers can get such certificates by on-line training course.

(3) Japan, USA and UK give special importance to the S&H work experience, Singapore and Indonesia do to training of 60 to 90 hrs course, and Thailand do to any of bachelor, training or experience.

(4) Actually, depending on scale and accident risk of construction project, the employer or contractor seem to determine requirements of HSO for example the following may be applied for large or complicated projects, NEBOSH International National Diploma (Level 6) in UK and CSP (Certified Safety Professionals) by BCSP in USA, for small projects, International General Certificate (A level) in UK and SMS (Safety Management Specialists) in USA.

NK: From the above, we propose to revise the (7) as above so that the qualification of HSO shall be 1) licensed or registered in the Country (legal requirement under the Laws of the Country), 2) specified in the Particular Safety Specification, and 3) International Diploma issued by NEBOSH in UK or Certified Safety Professionals by BCSP in USA or an equivalent alternative.

		GUIDELINES 1. Occupational S and H Program. U.S. Army Corps of Engineers, EM-385	Professionals (BCSP) The Safety and Health Manager shall be the CSP.		
3	UK	Internet Information	Environmental Health and safety manager	1) Bachelor's degree in Safety Engineering, etc. 2) National/International Diploma 1. NEBOSH National Diploma in Occupational Health and Safety. 2. British Safety Council Level 6 Diploma in Occupational Safety and Health., etc.	5 years related experience in environmental health and safety.
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(1) In Japanese regulation, the Project Manger shall be a General Safety and Health Manager and supervise the Safety officer(s). Japanese contractors may not assign Japanese engineers directly as HSO though they have experience and knowledge of safety management in construction sites and also ability to manage safety in ODA projects. However, they have no academic certificates in Japan and also international training certificates. The Japanese contractors who work for ODA projects may employ safety specialist who having qualification required in the contract or make their engineers be certified by international organizations such as NEBOSH and BCSP. The contractor's engineers can get such certificates by on-line training course.

(2) Japan, USA and UK give special importance to the S&H work experience, Singapore and Indonesia do to training of 60 to 90 hrs course, and Thailand do to any of bachelor, training or experience.

(3) Actually, depending on scale and accident risk of construction project, the employer or contractor seem to determine requirements of HSO for example the following may be applied for large or complicated projects, NEBOSH International National Diploma (Level 6) in UK and CSP (Certified Safety Professionals) by BCSP in USA, for small projects, International General Certificate (A level) in UK and SMS (Safety Management Specialists) in USA.

NK: From the above, we propose to revise the (7) as above so that the qualification of HSO shall be 1) licensed or registered in the Country (legal requirement under the Laws of the Country), 2) specified in the Particular Safety Specification, and 3)

<p>(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country, and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.</p> <p>NK: We considers NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot not find such person. Large contractors and European contractors may find them.</p> <p>We propose to add (7) "unless otherwise specified in Particular Safety Specification" before "the HSO..."</p> <p>I have split this clause for clarity</p> <p>I suggest that NEBOSH is OK as it is because an equivalent alternative is acceptable (see use of this term in JSSS 1.4.7.)</p> <p>It is also subject to receiving the consent of the Engineer.</p> <p>NK: We think "two (2) years experience outside the Country" is also too high requirement for the local contractors and also Japanese.</p> <p>We propose to delete "this two years outside the Country" and specify requirement in Particular Safety Specification depending on the Works.</p> <p>I suggest that it is better to state here as a basic standard. If JSSS cannot specify a general standard, the choice of Executing Agencies will vary greatly. I will draft a relevant clause for the User Guide but please note that I have reduced the experience requirements and deleted the international requirements.</p> <p>1.12.3. Supporting Staff</p> <p>NK-1: JICA commented and minutes recorded in January as follows:</p> <p>7.1.1 (5) HSO's duties:</p> <p>JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.</p> <p>No this is not a correct understanding, the HSO duties and obligations are far wider which is why this clause is correct and necessary</p> <p>Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?</p> <p>Yes, he will be very busy which is why he must be qualified and experience and given the full support staff that he requires and why he must receive the support of other Contractor's Personnel particularly Operation Leaders, all as stated herein</p>	<p>International Diploma issued by NEBOSH in UK or Certified Safety Professionals by BCSP in USA or an equivalent alternative.</p> <p>(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country, and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.</p> <p>NK: We considers NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot not find such person. Large contractors and European contractors may find them.</p> <p>We propose to add (7) "unless otherwise specified in Particular Safety Specification" before "the HSO..."</p> <p>I have split this clause for clarity</p> <p>I suggest that NEBOSH is OK as it is because an equivalent alternative is acceptable (see use of this term in JSSS 1.4.7.)</p> <p>It is also subject to receiving the consent of the Engineer.</p> <p>NK: We think "two (2) years experience outside the Country" is also too high requirement for the local contractors and also Japanese.</p> <p>We propose to delete "this two years outside the Country" and specify requirement in Particular Safety Specification depending on the Works.</p> <p>I suggest that it is better to state here as a basic standard. If JSSS cannot specify a general standard, the choice of Executing Agencies will vary greatly. I will draft a relevant clause for the User Guide but please note that I have reduced the experience requirements and deleted the international requirements.</p> <p>NK, please refer to editing above.</p> <p>NK6/6: Agreed to your editing and request to check (8) because it seems something understandable.</p> <p>1.12.3 Supporting Personnel</p> <p>Heading is changed to be consistent with the content</p> <p>NK-1: JICA commented and minutes recorded in January as follows:</p> <p>7.1.1 (5) HSO's duties:</p> <p>JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.</p> <p>No this is not a correct understanding, the HSO duties and obligations are far wider which is why this clause is correct and necessary</p> <p>Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?</p> <p>Yes, he will be very busy which is why he must be qualified and experience and given the full support staff that he requires and why he must receive the support of other Contractor's Personnel particularly Operation Leaders, all as stated herein</p> <p>MM: HSO should always be ultimately responsible as the leader really of the Contractor's safety team with support duties delegated as necessary to a number of personnel including Operation Leaders. This is described in Chapter 1.10.1 and has been discussed. No change is required.</p> <p>NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:</p>	<p>(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, and be whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.</p> <p>1.12.3 Supporting Personnel</p>
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<p>MM: HSO should always be ultimately responsible as the leader really of the Contractor's safety team with support duties <u>delegated as necessary to a number of personnel including Operation Leaders</u>. This is described in Chapter 1.10.1 and has been discussed. No change is required.</p> <p>NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:</p> <p>3. Common requirements in JSSS</p> <p>(4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の “The HSO shall inspect work area before starting work...” は、“The Contractor shall ...”へ変更する。</p> <p>HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.</p> <p>From this idea, the HSO in the sentence “The HSO shall inspect work area before starting work...” shall be replaced with “the Contractor”.</p> <p>Please let me review the Excavation comments when I receive them, however this looks correct as he is responsible for inspecting the safety arrangements, even if another person does the inspection on his behalf. It needs no change but the work will not always be directly inspected by him, he can and will delegate but he is singularly responsible and will sign it off.</p> <p>NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).</p> <p>We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor's Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.</p> <p>Based on the above idea, we want to revise some sentences below.</p> <p>(1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.</p> <p>(2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.</p> <p>NK: We propose to delete (2) from the idea of mentioned above NK-3. The supporting personnel shall be full time assignment. The Contractor shall establish system of daily check by the site staff or designated personnel for check by the Contractor and reporting by the site manager to the HSO.</p> <p>I think that (2) is clear, correct and necessary. Please refer to the following clauses also. It can be full time assistants or other Contractor's Personnel also who shall check certain aspects and who shall also have other responsibilities given to them by the HSO.</p> <p>(3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.</p> <p>(4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.</p> <p>(5) The HSO shall be expected to develop internal procedures whereby all supporting personnel (JC21) shall be aware of the requirements</p>	<p>3. Common requirements in JSSS</p> <p>(4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の “The HSO shall inspect work area before starting work...” は、“The Contractor shall ...”へ変更する。</p> <p>HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.</p> <p>From this idea, the HSO in the sentence “The HSO shall inspect work area before starting work...” shall be replaced with “the Contractor”.</p> <p>Please let me review the Excavation comments when I receive them, however this looks correct as he is responsible for inspecting the safety arrangements, even if another person does the inspection on his behalf. It needs no change but the work will not always be directly inspected by him, he can and will delegate but he is singularly responsible and will sign it off.</p> <p>NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).</p> <p>We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor's Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.</p> <p>Based on the above idea, we want to revise some sentences below.</p> <p>(1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.</p> <p>(2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.</p> <p>NK: We propose to delete (2) from the idea of mentioned above NK-3. 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It can be full time assistants or other Contractor's Personnel also who shall check certain aspects and who shall also have other responsibilities given to them by the HSO.</p> <p>(3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.</p> <p>(4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.</p> <p>(5) The HSO shall be expected to develop internal procedures whereby all supporting personnel (JC21) shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.</p> <p>JC21: It is understood “internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO...”</p>	<p>(1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.</p> <p>(2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.</p> <p>(3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.</p> <p>(4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.</p>
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<p>for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.</p> <p>JC21: It is understood "internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO..."</p> <p>But how "and the details of any inspection, for" relates to other part of this sentence???</p> <p>Non-natives would have difficulty to understand.</p> <p>NK5/6: YH think the sentence can be separated as follows though no so much difficult to understand the sentence. (次のように分解できるのだと思います。それほど違和感はありませんが。)</p> <p>1) the requirements for any inspection 2) the details of any inspection</p> <p>To MD, we would like to review the sentence because of sentence seems too long.</p> <p>(6) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.</p> <p>1.12.4. Inspections</p> <p>(1) The HSO shall be responsible for ensuring:</p> <p>(a) That all working areas of the Site (JC22) are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;</p> <p>JC22: The working areas are not always a part of the Site</p> <p>NK5/6: No comment to JC because JICA want to modify as they commented.</p> <p>(b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and</p>	<p>But how "and the details of any inspection, for" relates to other part of this sentence???</p> <p>Non-natives would have difficulty to understand</p> <p>NK5/6: YH think the sentence can be separated as follows though no so much difficult to understand the sentence</p> <p>1) the requirements for any inspection 2) the details of any inspection</p> <p>To MD, we would like to review the sentence because of sentence seems too long.</p> <p>I suggest the above is edited as follows:</p> <p>(6) The HSO shall prepare an internal procedure for the management of his supporting personnel, to ensure that:</p> <p>(a) Supporting personnel are made aware of the requirements for any inspection and the details thereof.</p> <p>(b) Supporting personnel immediately advise the HSO of any unsafe conditions with recommendations to prohibit the start or to stop or to change safety practices for the particular work</p> <p>(c) Communications and submissions between HSO and supporting personnel are efficient, timely and clear.</p> <p>Following implementation and compliance with the above procedure, the HSO shall sign all inspection records as if the inspection has been carried out by the HSO.</p> <p>(7) Where the Works or any part of the Works is to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified supporting personnel for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.</p> <p>1.12.4 Inspections</p> <p>(1) The HSO shall be responsible for ensuring:</p> <p>(a) That all working areas of the Site (JC22) are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;</p> <p>JC22: The working areas are not always a part of the Site</p> <p>NK5/6: No comment to JC because JICA want to modify as they commented.</p> <p>I am informed that my comment is not required on "blue" shaded items, therefore none is provided</p> <p>(b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to all affected persons and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and</p> <p>This is not directly connected with the provision of health and safety measures as referred to in 1.2.2 (6), however I suggest that in this case the wording is changed as above to make it non-specific and therefore of wider effect.</p>	<p>(5) The HSO shall prepare an internal procedure for the management of his supporting personnel, to ensure that:</p> <p>(a) Supporting personnel are made aware of the requirements for any inspection and the details thereof.</p> <p>(b) Supporting personnel immediately advise the HSO of any unsafe conditions with recommendations to prohibit the start or to stop or to change safety practices for the particular work</p> <p>(c) Communications and submissions between HSO and supporting personnel are efficient, timely and clear.</p> <p>Following implementation and compliance with the above procedure, the HSO shall sign all inspection records as if the inspection has been carried out by the HSO.</p> <p>(6) Where the Works or any part of the Works is to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified supporting personnel for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.</p> <p>1.12.4 Inspections</p> <p>(1) The HSO shall be responsible for ensuring:</p> <p>(a) That all working areas are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;</p> <p>(b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to all affected persons and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and</p>
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<p>(c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>].</p> <p>(2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.</p> <p>1.13 HSO - Scope of Duties and Authority</p> <p>NK: JICA added "and Authorities" in the last comment.</p> <p>Now changed as above</p> <p>1.13.1. The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.</p> <p>1.13.2. The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:</p> <p>(1) Health and Safety Management Work:</p> <p>(a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;</p> <p>(b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;</p> <p>(c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;</p> <p>(d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;</p> <p>(e) Temporarily stopping the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>];</p> <p>(f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;</p> <p>(g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;</p> <p>(h) Appointment of further supporting personnel (refer to 1.12.3 [<i>Supporting Staff</i>]);</p> <p>(i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;</p> <p>NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above:</p> <p>(i) Instructing and training <u>the person in charge of construction works and the Contractor's Equipment</u> in the health and safety aspects of their work including requirements for inspection and <u>reporting of results</u> to HSO;</p>	<p>(c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>].</p> <p>(3) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.</p> <p>1.13 HSO - Scope of Duties and Authority</p> <p>NK: JICA added "and Authorities" in the last comment.</p> <p>Now changed as above</p> <p>1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.</p> <p>1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:</p> <p>(1) Health and Safety Management Work:</p> <p>(a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;</p> <p>(b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;</p> <p>(c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;</p> <p>(d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;</p> <p>(e) Temporarily stopping the Works or any part of the Works where the Engineer so instructs in accordance with JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>];</p> <p>(f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;</p> <p>(g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;</p> <p>(h) Appointment of further supporting personnel (refer to 1.12.3 [<i>Supporting Staff</i>]);</p> <p>(i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;</p> <p>NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above:</p> <p>(i) Instructing and training <u>the person in charge of construction works and the Contractor's Equipment</u> in the health and safety aspects of their work including requirements for inspection and <u>reporting of results</u> to HSO;</p> <p>I disagree and do not feel that any change is necessary. The position and authority of the HSO for the health safety on the Works should not be compromised. Who he requires assistance from is really his choice and it is dependent upon many factors such as the contractor's organisation, who is</p>	<p>(c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>].</p> <p>(2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.</p> <p>1.13 HSO - Scope of Duties and Authority</p> <p>1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.</p> <p>1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:</p> <p>(1) Health and Safety Management Work:</p> <p>(a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;</p> <p>(b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;</p> <p>(c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;</p> <p>(d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;</p> <p>(e) Temporarily stopping the Works or any part of the Works where the Engineer so instructs in accordance with JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>];</p> <p>(f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;</p> <p>(g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;</p> <p>(h) Appointment of further supporting personnel (refer to 1.12.3 [<i>Supporting Staff</i>]);</p> <p>(i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;</p>
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<p>I disagree and do not feel that any change is necessary. The position and authority of the HSO for the health safety on the Works should not be compromised. Who he requires assistance from is really his choice and it is dependent upon many factors such as the contractor's organisation, who is available, the general experience, capability and skill level of workers. We or the Engineer should have no interest in who he delegates support to providing the HSO does his job properly.</p> <p>(j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;</p> <p>(k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;</p> <p>(l) Planning and implementation of various training and education implementation plans;</p> <p>(m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;</p> <p>(n) Preparing regular internal and external reports on health and safety activities; and</p> <p>(o) Hazard prediction activity.</p> <p>1.14 Procedure for Resuming the Works</p> <p>1.14.1. If the Engineer has issued an instruction under JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [<i>HSO - Scope of Duties and Authority</i>] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:</p> <p>(1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.</p> <p>(2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.</p> <p>(3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.</p> <p>(4) If the Engineer gives no such notice of non-compliance for the original proposal within seven fourteen (147) (JC23) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving seven-three (73) (JC24) days' notice in writing of the resumption date.</p> <p>To be proactive, the Engineer may give consent at any stage within the above stated time scales.</p> <p>JC23& 24: 14 days are too long, and 7 days are too long.</p>	<p>available, the general experience, capability and skill level of workers. We or the Engineer should have no interest in who he delegates support to providing the HSO does his job properly.</p> <p>NK6/6: Agreed to MD's opinion above.</p> <p>(j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;</p> <p>(k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;</p> <p>(l) Planning and implementation of various training and education implementation plans;</p> <p>(m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;</p> <p>(n) Preparing regular internal and external reports on health and safety activities; and</p> <p>(o) Hazard prediction activity.</p> <p>1.14 Procedure for Resuming the Works</p> <p>1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [<i>HSO - Scope of Duties and Authority</i>], then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:</p> <p>(1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.</p> <p>(2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.</p> <p>(3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.</p> <p>(4) If the Engineer gives no such notice of non-compliance for the original proposal within seven fourteen (147) (JC23) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving seven-three (73) (JC24) days' notice in writing of the resumption date.</p> <p>To be proactive, the Engineer may give consent at any stage within the above stated time scales.</p> <p>JC23& 24: 14 days are too long, and 7 days are too long.</p> <p>NK5/6: Will modify as commented.</p> <p>I am informed that my comment is not required on "blue" shaded items, therefore none is provided.</p>	<p>(j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;</p> <p>(k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;</p> <p>(l) Planning and implementation of various training and education implementation plans;</p> <p>(m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;</p> <p>(n) Preparing regular internal and external reports on health and safety activities; and</p> <p>(o) Hazard prediction activity.</p> <p>1.14 Procedure for Resuming the Works</p> <p>1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [<i>HSO - Scope of Duties and Authority</i>] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:</p> <p>(1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.</p> <p>(2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.</p> <p>(3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.</p> <p>(4) If the Engineer gives no such notice of non-compliance for the original proposal within seven (7) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving three (3) days' notice in writing of the resumption date.</p> <p>To be proactive, the Engineer may give consent at any stage within the above stated time scales.</p> <p>(5) The Contractor resumes the Works or part of the Works on the due date.</p>
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NK5/6: Will modify as commented.

- (5) The Contractor resumes the Works or part of the Works on the due date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1. The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2. In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

NK: We think the 1.15 is same as Japanese draft, however, we feel it is not clear who take the following action.

(5) Is there any good idea to express the H&S management shall be made by management personnel consisting of construction managers, Operation Leaders, HSO (for reference I added personnel in charge of the activities below.).

Please see above notes, I do not feel that the following is desirable or necessary.

For further understanding, the Contractor's Representative has similar in fact heavier responsibilities but we (nor FIDIC) consider defining which of his staff do what to support him, I do not recommend but we try to do it

Overall Safety Management Activities:

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); ~~by construction managers, Operation Leaders, HSO,~~
- ~~(b)~~ Attending pre-work meetings, pre-start meetings, schedule meetings; and ~~by construction managers, HSO,~~
- (c) Monitoring the implementation of the Safety Plan. ~~by HSO,~~

Above is not recommended

(1) Daily Safety Management of Contractor's Personnel:

NK: We would like to add "Daily" before Safety in (2) to distinguish from (1).

No problem added already

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; ~~by construction managers, HSO,~~
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures; ~~by construction managers, Operation Leaders,~~

- (5) The Contractor resumes the Works or part of the Works on the due date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

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For further understanding, the Contractor's Representative has similar in fact heavier responsibilities but we (nor FIDIC) consider defining which of his staff do what to support him, I do not recommend but we try to do it

Overall Safety Management Activities:

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); ~~by construction managers, Operation Leaders, HSO,~~
- (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and ~~by construction managers, HSO,~~
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(1) Daily Safety Management of Contractor's Personnel:

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No problem added already

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; ~~by construction managers, HSO,~~
 - (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures; ~~by construction managers, Operation Leaders,~~
 - ~~(c)~~ Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: ; ~~by construction managers, Operation Leaders,~~
- 5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;

- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

(1) Overall Safety Management Activities:

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM);
- (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and
- (c) Monitoring the implementation of the Safety Plan.

(2) Daily Safety Management of Contractor's Personnel:

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM;
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures;
- (c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as:
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline
- (d) Instruction and management of safety education and training;
- (e) Instruction and management of all safety measures; and

<p>(⇒) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: ; (by construction managers, Operation Leaders)</p> <p>5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;</p> <p>(⇒) Instruction and management of safety education and training; (by construction managers, HSO)</p> <p>(⇒) Instruction and management of all safety measures; and (by construction managers, Operation Leaders, HSO)</p> <p>(f) Site Safety Inspections—(by construction managers, Operation Leaders, HSO)</p> <p>None of above is recommended</p> <p>NK: We withdraw the addition.</p> <p>NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.</p> <p>No problem deleted already</p> <p>1.16 Joint Site Safety Inspections</p> <p>1.16.1. In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.</p> <p>1.16.2. Frequency of Joint Site Safety Inspections shall be at least once a week.</p> <p>1.16.3. Where any safety risks are detected during the inspections, the Contractor shall take immediate action.</p> <p>1.16.4. The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.</p> <p>1.16.5. The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.</p> <p>1.17 Compliance Monitoring and Auditing</p> <p>1.17.1. The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured. Such compliance shall be monitored efficiently and transparently at all times, for which purpose the Contractor shall:</p> <p>NK: We propose to divide the above to two sentences because the above sentence is long and contains two subjects.</p> <p>This is not quite correct but I have divided anyway</p> <ol style="list-style-type: none"> (1) Create checklists for monitoring. (2) Carry out regular and random inspections. (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents. (4) Create storage and filing systems for the monitoring records. 	<p>(⇒) Instruction and management of safety education and training; (by construction managers, HSO)</p> <p>(⇒) Instruction and management of all safety measures; and (by construction managers, Operation Leaders, HSO)</p> <p>(f) Site Safety Inspections—(by construction managers, Operation Leaders, HSO)</p> <p>None of above is recommended</p> <p>NK: We withdraw the addition.</p> <p>NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.</p> <p>No problem deleted already</p> <p>1.16 Joint Site Safety Inspections</p> <p>1.16.1 In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. 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<p>(5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer.</p> <p>1.17.2. Safety inspections are intended to search for risks and hazards, which present a threat to safe working.</p> <p>1.17.3. The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:</p> <ol style="list-style-type: none"> (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements? (2) Are the Safety Plan requirements being met? (3) Is there documented proof of compliance? (4) Is health and safety training effective? (5) Is the Contractor's health and safety management system working effectively? <p>1.17.4. The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.</p> <p>1.17.5. The audit team procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer.</p> <p>1.17.5-1.17.6. Unless otherwise consented to by the Engineer, The audit shall be headed by a senior member of the Contractor's head office health and safety team.</p> <p>1.17.6-1.17.7. If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.</p> <p>1.17.7-1.17.8. The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.</p> <p>1.17.8-1.17.9. The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.</p> <p>1.17.9-1.17.10. The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems.</p> <p>The Audits shall not replace the regular health and safety inspections.</p> <p>NK: We think the above sentence is better to be divided two sentences.</p> <p>This is not quite correct but I have divided anyway</p> <p>1.17.10-1.17.11. The audits shall be conducted on a random basis at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.</p> <p>1.17.11-1.17.12. The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor. 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(JC25)</p> <p>NK: JICA deleted in the last comment. We also consider the Engineer does not do auditing but inspection/supervise the Contractor's activities, and agree to delete this.</p> <p>I do not really understand why it is deleted, as in any case the Engineer should be able to request/initiate an audit if he feels that the H and S system is not working properly.</p> <p>NK: NK misunderstood this clause as the Engineer to do audit. We recommend now as follows:(time limit is given considering the preparation and trip time of the auditing</p>	<p>1.17.2 Safety inspections are intended to search for risks and hazards, which present a threat to safe working.</p> <p>1.17.3 The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:</p> <ol style="list-style-type: none"> (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements? (2) Are the Safety Plan requirements being met? (3) Is there documented proof of compliance? (4) Is health and safety training effective? 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Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.</p> <p>NK: JICA commented "Such "not to do" should not be included in the specification." and deleted this sentence in the last comment. We agree to delete this because the auditing team cannot come to the site from Headquarters located in other countries by short notice, and the ISO auditing is made by around one month notice or as scheduled.</p> <p>No comment, to be deleted.</p> <p>1.17.13-1.17.14. An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.</p> <p>1.17.14-1.17.15. The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.</p> <p>1.18 Proper Placement of Contractor's Personnel</p> <p>1.18.1. To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.</p> <p>1.18.2. In compliance with GC 6.9 [<i>Contractor's Personnel</i>], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.</p> <p>Change not correct.</p> <p>1.18.3. Labourer/Workers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.</p> <p>1.18.4. The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.</p> <p>1.18.5. The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective</p>	<p>team, and the safety management state cannot be improved in short time except such as cleaning the site, etc. If the Contractor takes actions for the auditing in short time, there is a merit for the Contractor to show example of required improvement.</p> <p>(6) The Engineer may at his option instruct the Contractor to execute a health and safety audit by giving proper preparation time for the auditing team between 3 days and 7 days.</p> <p>JC25: It is not practical that the auditing team of the headquarters visit the Site within 3 to 7 days after the Engineer's instruction.</p> <p>NK: 1.17.11(1.17.12) will be deleted.</p> <p>1.17.12, 1.17.13. 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These records shall be made available for inspection by the Engineer.</p> <p>1.18.7. Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:</p> <ol style="list-style-type: none"> (1) Work content and work environment. (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability. (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts. (4) Allocation of an achievable and safe work volume and time. (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [Child Labour]. <p>1.18.8. If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.</p> <p>1.18.9. The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.</p> <p>1.18.10. The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that the HSO</p>	<p>trades or occupations and the Contractor shall keep records of compliance with this requirement. (JC26)</p> <p>JC26: Duplication with 1.18.2. Also, difficult to have a concrete image on what kind of records???</p> <p>NK5/6: Will delete as commented.</p> <p>I am informed that my comment is not required on "blue" shaded items, therefore none is provided</p> <p>1.18.6 The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.</p> <p>The above will require editing as above in view of your change</p> <p>1.18.7 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:</p> <ol style="list-style-type: none"> (1) Work content and work environment. (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability. (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts. (4) Allocation of an achievable and safe work volume and time. (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [Child Labour]. <p>1.18.8 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.</p> <p>1.18.9 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.</p> <p>1.18.10 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. 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<p>resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.</p> <p>NK: We think it is better to replace “he” with “the HSO” though he/she is nowadays used.</p> <p>It is not necessary, please refer to JSSS 1.2.2 (8) and GC 1.2.(a). I have used “He” and “his” for example consistently and if it changes here it will require further change.</p> <p>1.19 Safety Training Generally</p> <p>1.19.1. The Contractor shall conduct health and safety education and training for all the Contractor’s Personnel.</p> <p>1.19.2. The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.</p> <p><u>1.19.3.</u> Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.</p> <p><u>1.19.3-1.19.4.</u> Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate). (JC27)</p> <p>JC27: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.</p> <p>NK5/6: Will modify as commented.</p> <p>1.20 Safety Induction Training</p> <p>1.20.1. Safety induction training shall be provided by the Contractor for all Contractor’s Personnel, any subcontractors, suppliers and others for whom he the HSO is responsible, including the Employer’s Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.</p> <p>Ditto above</p> <p>No problem.</p> <p>This is training and may not be directly connected with the provision of health and safety measures as referred to in 1.2.2 (6). I suggest for clarity that the full wording should remain.</p> <p>1.20.2. The following subjects shall be covered:</p> <ol style="list-style-type: none"> (1) Responsible persons, chain of command and means of communication. (2) Use of Contractor’s Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care. (3) Working procedures generally. (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment. <p>(5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22</p> <p>1.20.2. The following subjects shall be covered:</p> <ol style="list-style-type: none"> (1) Responsible persons, chain of command and means of communication. (2) Use of Contractor’s Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care. (3) Working procedures generally. (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment. 	<p>It is not necessary, please refer to JSSS 1.2.2 (8) and GC 1.2.(a). I have used “He” and “his” for example consistently and if it changes here it will require further change.</p> <p>NK6/6: We agreed to the above.</p> <p>1.19 Safety Training Generally</p> <p>1.19.1 The Contractor shall conduct health and safety education and training for all the Contractor’s Personnel.</p> <p>1.19.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.</p> <p><u>1.19.3</u> Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.</p> <p><u>1.19.3-1.19.4</u> Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate). (JC27)</p> <p>JC27: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.</p> <p>NK5/6: Will modify as commented.</p> <p>I am informed that my comment is not required on “blue” shaded items, therefore none is provided</p> <p>1.20 Safety Induction Training</p> <p>1.20.1 Safety induction training shall be provided by the Contractor for all Contractor’s Personnel, any subcontractors, suppliers and others for whom he the HSO is responsible, including the Employer’s Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.</p> <p>Ditto above</p> <p>No problem.</p> <p>This is training and may not be directly connected with the provision of health and safety measures as referred to in 1.2.2 (6). I suggest for clarity that the full wording should remain.</p> <p>1.20.2 The following subjects shall be covered:</p> <ol style="list-style-type: none"> (1) Responsible persons, chain of command and means of communication. (2) Use of Contractor’s Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care. (3) Working procedures generally. (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment. <p>(5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22</p>	<p>Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.</p> <p>1.19 Safety Training Generally</p> <p>1.19.1 The Contractor shall conduct health and safety education and training for all the Contractor’s Personnel.</p> <p>1.19.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.</p> <p>1.19.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.</p> <p>1.19.4 Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate).</p> <p>1.20 Safety Induction Training</p> <p>1.20.1 Safety induction training shall be provided by the Contractor for all Contractor’s Personnel, any subcontractors, suppliers and others for whom the HSO is responsible, including the Employer’s Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.</p> <p>1.20.2 The following subjects shall be covered:</p> <ol style="list-style-type: none"> (1) Responsible persons, chain of command and means of communication. (2) Use of Contractor’s Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care. (3) Working procedures generally. (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.
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<p>(4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.</p> <p>(5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (Refer to separate requirements for special training).</p> <p>NK: May we know where we can find to refer to special training?</p> <p>Rephrased</p> <p>(6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.</p> <p>(7) Maintaining all working areas in an orderly, tidy and clean condition at all times.</p> <p>(8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.</p> <p>(9) Firefighting; actions, precautions and control.</p> <p>(10) Health and safety rules.</p> <p>(11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.</p> <p>(12) Emergency Response Plan; evacuation and calling list.</p> <p>(13) Other related health and safety matters.</p> <p>1.20.3. Practical on-Site demonstrations shall be included.</p> <p>1.20.4. Training Personnel (JC28)</p> <p>JC28: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).</p> <p>NK5/6: NK agreed to the above.</p> <p>(1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.</p> <p>(2) All trainers shall be fluent in the language of the persons to be trained.</p> <p>(3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.</p> <p>1.20.5. Records of education and training</p> <p>The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.</p> <p>1.21 Skill Training</p>	<p>[Dangerous Work] for additional training requirements. (Refer to separate requirements for special training).</p> <p>NK: May we know where we can find to refer to special training?</p> <p>Rephrased</p> <p>(6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.</p> <p>(7) Maintaining all working areas in an orderly, tidy and clean condition at all times.</p> <p>(8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.</p> <p>(9) Firefighting; actions, precautions and control.</p> <p>(10) Health and safety rules.</p> <p>(11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.</p> <p>(12) Emergency Response Plan; evacuation and calling list.</p> <p>(13) Other related health and safety matters.</p> <p>1.20.3 Practical on-Site demonstrations shall be included.</p> <p>1.20.4 Training Personnel (JC28)</p> <p>JC28: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).</p> <p>NK5/6: NK agreed to the above.</p> <p>I am informed that my comment is not required on "blue" shaded items, therefore none is provided</p> <p>(1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.</p> <p>(2) All trainers shall be fluent in the language of the persons to be trained.</p> <p>(3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.</p> <p>1.20.5 Records of education and training</p> <p>The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.</p> <p>1.21 Skill Training</p> <p>1.21.1 The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractor has been appointed under the Contract</p>	<p>(5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements.</p> <p>(6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.</p> <p>(7) Maintaining all working areas in an orderly, tidy and clean condition at all times.</p> <p>(8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.</p> <p>(9) Firefighting; actions, precautions and control.</p> <p>(10) Health and safety rules.</p> <p>(11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.</p> <p>(12) Emergency Response Plan; evacuation and calling list.</p> <p>(13) Other related health and safety matters.</p> <p>1.20.3 Practical on-Site demonstrations shall be included.</p> <p>1.20.4 Training Personnel</p> <p>(1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.</p> <p>(2) All trainers shall be fluent in the language of the persons to be trained.</p> <p>(3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.</p> <p>1.20.5 Records of education and training</p> <p>The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.</p>
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<p>1.21.1. The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. <i>The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.</i> (JC29)</p> <p>JC29: Not needed to say so in the specification.</p> <p>NK: Will delete as commented.</p> <p><u>1.21.2. The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available in the Country or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects, the Contractor shall:</u></p> <p><u>(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or</u></p> <p><u>(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.</u></p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, (JC30) all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.</p> <p>JC30: May be the case in many projects, but skilled staff may be sometimes locally mobilized.</p> <p>NK5/6: Will modify as commented.</p> <p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety</p>	<p><i>on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.</i> (JC29)</p> <p>JC29: Not needed to say so in the specification.</p> <p>NK: Will delete as commented.</p> <p><i>I am informed that my comment is not required on "blue" shaded items, therefore none is provided</i></p> <p><u>1.21.2 The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available in the Country or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects, the Contractor shall:</u></p> <p><u>(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or</u></p> <p><u>(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.</u></p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, (JC30) all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.</p> <p>JC30: May be the case in many projects, but skilled staff may be sometimes locally mobilized.</p> <p>NK5/6: Will modify as commented.</p> <p><i>I am informed that my comment is not required on "blue" shaded items, therefore none is provided</i></p> <p>Notes for NK</p> <p><i>This is already reflected in FIDIC, 6.1 second paragraph. The suggested change actually changes the FIDIC contract requirements by introducing the wording: "to the extent practicable and reasonable". Such a change is not necessary and not recommended.</i></p> <p><i>I had drafted this clause to strengthen the requirements for importing foreign resources, obviously where they are not available locally. The suggested added wording has no contractual meaning and will definitely weaken if not destroy any attempt by the Engineer (or Employer) to impose stronger requirements for importing foreign skilled persons even though the Employer is already paying for it. I note the other deletions, which also tend to weaken requirements.</i></p> <p>NK6/6: We take note the above.</p> <p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion <u>and Defect Notification Period.</u>(JC31)</p> <p>JC31: The Contractor also has to work during DNP and need skilled staff.</p>	<p>1.21 Skill Training</p> <p>1.21.1 The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations.</p> <p>1.21.2 The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if the qualified, skilled and experienced Contractor's Personnel required by the Contract is not available in the Country or not available in the numbers or of the standards of for the periods required, the Contractor shall:</p> <p>(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or.</p> <p>(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.</p> <p>This shall be in such numbers and for such periods as are necessary to</p>
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throughout the Time for Completion and Defect Notification Period.(JC31)

JC31: The Contractor also has to work during DNP and need skilled staff

NK5/6: Will modify as commented.

Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply: (JC32)

JC32: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences?

I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text

NK5/6: To MD, please review the comment and modify the sentences.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply: (JC32)

JC32-1: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences?

JC32-2: I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text

NK5/6: To MD, please review the comment and modify the sentences for JC32-1.

NK6/6: We proposed for JC32-2 as modified MD's proposed 1.21.3.

Your comment requests that training be provided for other workers in addition to operation leaders.

Your original draft required training only for operation leaders and workers engaged in dangerous work.

Your draft documents contained requirements which were very unclear and which had little or actually no connection with the contract.

Dangerous work is covered by 1.20.2

Please refer to my comments on your original draft which I have explained since; I have advised that the Contractor already has a basic obligation to provide appropriately qualified, skilled and experienced personnel under the contract (see GC 6.1 and 6.9) and these contract requirements must not be compromised.

I had explained that it is illogical and contractually incorrect to require the Contractor to provide skilled personnel (where necessary importing skilled foreign personnel) under the Contract, expect the Employer to pay for this via the Contract Price, yet then assign non-compliant workers and other personnel and expect the Employer to pay for further skill training.

If this is required, the extent to which this is to be applied clearly needs to be carefully defined and controlled otherwise it can be argued that having complied with the training requirements he is not responsible for providing any additional capable and skilled persons unless the employer allows and pays for more skill training.

I am reluctant to add further skill training without knowing your precise additional requirements. Can you therefore please describe who shall receive skill training, to what level, with what resources, how to be managed and paid for and how this is to be made compatible with the Contract and I will edit your text as necessary and include this against earlier advice.

On the basis that skill training is only required to develop the skills of local operation leaders (which is still stretching the contract), I suggest editing this subclause as follows:

NK6/6: Training of OL is accepted as MD proposed below. That for skilled workers are proposed to add and modify 1.21.3.

1.21.21.3 Further Training of Operation Leaders

- (1) Unless otherwise specified in the Particular Safety Specification and without limiting or changing the Contractor's obligations under the Contract, the Contractor shall be required to select candidates from his local skilled workforce that he considers are suitable to act as future Operation Leaders.

maintain the required standards of performance, quality, health and safety throughout the Time for Completion and Defect Notification Period.

1.21.3 Further Training of Operation Leaders and Skilled Workers

- (1) Unless otherwise specified in the Particular Safety Specification and without limiting or changing the Contractor's obligations under

<p>(1) To compliment this OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to provide basic skill training to develop the ability of local counterpart trainee operation leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots.</p> <p>(2) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer <u>for his consent</u>.</p> <p>NK: We think “for his consent” can be replaced with “for information” as written in Issue 6.</p> <p>Consent is better which is why I have used it. There will be a great tendency for the Contractor not to comply with these requirements properly and it needs to be enforceable somehow, otherwise safety (and quality and performance) will suffer.</p> <p>“For information” really has no meaning.</p> <p>If only “for information”, Contractor can proceed even if the course syllabus and hours are clearly inadequate and would not otherwise be acceptable.</p> <p>The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.</p> <p><u>Details-Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.</u></p> <p>NK: This request is specified in Annex 1.2 (24)(26) as Outline shall be submitted in Bid Stage SP.</p> <p>(7) This has been repeatedly discussed and explained.</p> <p>(8) If safety is to improve, this must happen from Bid stage onwards.</p> <p>(9) Every part of the Bid SP is Outline but some information is necessary on each subject listed in the Annex and should be submitted at Bid stage. If it is inadequate, only then can it be clarified and negotiated before the Contract is signed. After signing, is often too late.</p> <p>NK: We agree to MD’s opinion. However, the above sentence needs to be modified to such as “Updated details of such training mentioned in the Bid Stage Safety Plan shall be submitted.”</p> <p><u>1.21.2-1.21.3. Subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor’s Personnel from other countries on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.</u></p>	<p>(2) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their management abilities, skill levels and awareness of international safety and quality standards.</p> <p>(3) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability skills and awareness and also to pass on their knowledge in future to their working colleagues and compatriots.</p> <p>(4) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.</p> <p>NK: We think “for his consent” can be replaced with “for information” as written in Issue 6.</p> <p>Consent is better which is why I have used it. There will be a great tendency for the Contractor not to comply with these requirements properly and it needs to be enforceable somehow, otherwise safety (and quality and performance) will suffer.</p> <p>“For information” really has no meaning.</p> <p>If only “for information”, Contractor can proceed even if the course syllabus and hours are clearly inadequate and would not otherwise be acceptable.</p> <p>(5) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.</p> <p>(6) <u>Details-Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.</u></p> <p>NK: This request is specified in Annex 1.2 (24)(26) as Outline shall be submitted in Bid Stage SP.</p> <p>This has been repeatedly discussed and explained.</p> <p>If safety is to improve, this must happen from Bid stage onwards.</p> <p>Every part of the Bid SP is Outline but some information is necessary on each subject listed in the Annex and should be submitted at Bid stage. If it is inadequate, only then can it be clarified and negotiated before the Contract is signed. After signing, is often too late.</p> <p>NK: We agree to MD’s opinion. However, the above sentence needs to be modified to such as “Updated details of such training mentioned in the Bid Stage Safety Plan shall be submitted.”</p> <p><u>1.21.2 Subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor’s Personnel from other countries on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.</u></p> <p>I cannot agree with or recommend the deletion of the clause regarding consent of the Engineer before demobilisation of foreign Operation Leaders, it is written for a purpose. It is sometimes difficult to get a contractor to assign any skilled foreign personnel on JICA projects in remote locations even when they are clearly necessary, for reasons of safety, quality and performance. Even when mobilised for example to comply with this clause, the contractor will have an incentive to demobilise such personnel as soon as he possibly can to optimise his profits rather than consider safety, etc.. I have recommended that some control is vital i.e. review and consent of the Engineer.</p> <p>Other clauses that have now been deleted were also necessary to add to the flavour of this sensitive clause.</p>	<p>the Contract, the Contractor shall be required to select candidates from his local skilled and unskilled workforce that he considers are suitable to act as future Operation Leaders and skilled workers, respectively.</p> <p>(2) Training of Operation Leaders</p> <p>(a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their management abilities, skill levels and awareness of international safety and quality standards.</p> <p>(b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability skills and awareness and also to pass on their knowledge in future to their working colleagues and compatriots.</p> <p>(3) Training of Skilled Workers</p> <p>(a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their management abilities, skill levels and awareness of international safety and quality standards.</p> <p>(b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability skills and awareness <u>according to the work</u> and also to pass on their knowledge in future to their working colleagues and compatriots.</p> <p>(4) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.</p> <p>(5) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.</p> <p>(6) Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.</p>
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<p>1.21.3. When the Contractor is satisfied that candidates have been successfully trained and qualified, and that they are able to act fully in accordance with the requirements of the Contract and subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries.</p> <p>NK: This sentence may be necessary to be reviewed.</p> <p>Please review the above. Control is essential otherwise the working trainers will be demobilised too soon.</p> <p>Please also note that this entire clause is my suggestion only, if JICA and/or NK do not want it, please advise and I will delete all such training as necessary.</p> <p>1.21.4. It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice based upon capability in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.</p> <p>1.21.5. Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.</p> <p>NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.</p> <p>See above notes, it really should be "consent"</p> <p>1.21.6. Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.</p> <p>1.22 Dangerous Work</p> <p>1.22.1. Particular care shall be taken by the Contractor when performing any Dangerous Work.</p> <p>1.22.2. Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the</p>	<p>If now has little meaning or effect and basically a unscrupulous contractor will can now argue that the assignment of some foreign operation leaders and trainers for a short period complies with the requirements, his contract obligations are then all satisfied and having demobilised same persons, the employer is responsible for inadequacies beyond that point by not specifying more training.</p> <p>1.21.3 When the Contractor is satisfied that candidates have been successfully trained and qualified, and that they are able to act fully in accordance with the requirements of the Contract and subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries.</p> <p>NK: This sentence may be necessary to be reviewed.</p> <p>Please review the above. Control is essential otherwise the working trainers will be demobilised too soon.</p> <p>Please also note that this entire clause is my suggestion only, if JICA and/or NK do not want it, please advise and I will delete all such training as necessary.</p> <p>Please see above; the deletion of the other clause is not recommended. This training clause is an unusual requirement which is not compatible with the contract and it deserves full explanation as there is otherwise a risk that it will be misused in future.</p> <p>(7) It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice based upon capability in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.</p> <p>(8) Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.</p> <p>NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.</p> <p>See above notes, it really should be "consent"</p> <p>NK6/6: (8) is moved to 1.21.5 because they are general requirement in 1.21.</p> <p>1.21.4 Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.</p> <p>1.22 Dangerous Work</p> <p>1.22.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.</p> <p>1.22.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.</p> <p>1.22.3 The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by</p>	<p>1.21.4 Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.</p> <p>1.21.5 Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.</p> <p>1.22 Dangerous Work</p> <p>1.22.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.</p> <p>1.22.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the</p>
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<p>nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.</p> <p>1.22.3. The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [Permit System] that is to be worn conspicuously and be available for validation by the Engineer.</p> <p>I have added the following because of apparent concerns over the meaning of JSSS 2.5.1.(3)</p> <p>1.22.4. The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist (JC33) trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.</p> <p>JC33: specially</p> <p>NK5/6: To MD, Please check it.</p> <p>1.22.5. A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.</p> <p>1.22.6. The Contractor shall select-train and equip a specialist rescue team or teams of selected workers at the Site <u>for emergency rescue operation in accordance with JSSS 1.24.6 and 1.24.7.</u> who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue. (JC34).</p> <p>JC34: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.</p> <p>NK5/6: Will modify as commented.</p> <p>1.22.7. Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC35)</p> <p>NK: Harness is basically used now and belts is not, so deletion of belt is made.</p> <p>Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 2</p> <p>The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works.</p> <p>JC35: Move to 1.24</p> <p>NK5/6: Will modify as commented.</p> <p>1.22.8.1.22.7. The requirement for rescue teams and rescue equipment shall be as specified in the Particular Safety Specification.</p> <p>1.22.9.1.22.8. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC36).</p>	<p>issuing an official permit in accordance with JSSS 1.23 [Permit System] that is to be worn conspicuously and be available for validation by the Engineer.</p> <p>I have added the following because of apparent concerns over the meaning of JSSS 2.5.1.(3)</p> <p>1.22.4 The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist (JC33) trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.</p> <p>JC33: specially</p> <p>NK5/6: To MD, Please check it.</p> <p>Can also be "specially" if you prefer.</p> <p>NK6/6 Confirmed.</p> <p>1.22.5 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.</p> <p>1.22.6 The Contractor shall select-train and equip a specialist rescue team or teams of selected workers at the Site <u>for emergency rescue operation in accordance with JSSS 1.24.6 and 1.24.7.</u> who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue. (JC34).</p> <p>JC34: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.</p> <p>NK5/6: Will modify as commented.</p> <p>1.22.7 Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC35)</p> <p>NK: Harness is basically used now and belts is not, so deletion of belt is made.</p> <p>Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 2</p> <p>The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works.</p> <p>JC35: Move to 1.24</p> <p>NK5/6: Will modify as commented.</p> <p>NK6/6 Confirmed moved to 1.24.7.</p> <p>1.22.8.1.22.7. The requirement for rescue teams and rescue equipment shall be as specified in the Particular Safety Specification.</p> <p>1.22.9.1.22.8. If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC36).</p> <p>JC36: ditto</p> <p>NK5/6: Will modify as commented.</p> <p>1.22.10.1.22.9 The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately</p>	<p>nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.</p> <p>1.22.3 The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [Permit System] that is to be worn conspicuously and be available for validation by the Engineer.</p> <p>1.22.4 The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specially trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.</p> <p>1.22.5 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.</p> <p>1.22.6 The Contractor shall train and equip teams of selected workers at the Site for emergency rescue operation in accordance with JSSS 1.24.6 and 1.24.7.</p> <p>1.22.7 Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. Moved 1.24.7</p>
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<p>JC36: ditto</p> <p>NK5/6: Will modify as commented.</p> <p>1.22.10-1.22.9. The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.</p> <p>1.22.11-1.22.10. Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.</p> <p>1.22.12-1.22.11. For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>].</p> <p>1.22.13-1.22.12. Hazardous Substances.</p> <p>(1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists Subcontractor(+) (JC37) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.</p> <p>JC37: not necessarily Subcontractors</p> <p>NK5/6: Will modify as commented.</p> <p>(2) The Contractor shall obtain the Engineer's consent for such specialist Subcontractors and their submit detailed Safety Plans and Method Statements <u>with respect to the removal and disposal of the Hazardous Substances shall also be submitted</u> (JC38) to the Engineer in accordance with JSSS 1.7 [<i>Contractor's Safety Plans</i>] and JSSS 1.9 [<i>Contractor's Method Statements</i>].</p> <p>JC38: modified accordingly</p> <p>NK5/6: Will modify as commented.</p> <p>1.23 Permit to Work System</p> <p>1.23.1. The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.</p> <p>1.23.2. The system shall be designed to control safety for <u>Dangerous Work</u> all types of high risk work likely to be encountered, including for example: (JC39)</p> <p>JC39: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.</p> <p>NK5/6: Will modify as commented.</p> <p><u>1.23.3. Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3 Example of Dangerous Work.</u></p> <p>There is no need to change this or give any examples, please refer to the definition of Dangerous Work in Annex 1.1. If you insist, change to "for example" as in the following subclause.</p> <p>(1) Work in elevated positions, for example, transmission towers and scaffolding, roof or ceiling work.</p>	<p>categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.</p> <p>1.22.11-1.22.10 Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.</p> <p>1.22.12-1.22.11 For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>].</p> <p>1.22.13-1.22.12 Hazardous Substances.</p> <p>(3) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists Subcontractor(+) (JC37) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.</p> <p>JC37: not necessarily Subcontractors</p> <p>NK5/6: Will modify as commented.</p> <p>No problem.</p> <p>NK: confirmed.</p> <p>(4) The Contractor shall obtain the Engineer's consent for such specialist Subcontractors and their submit detailed Safety Plans and Method Statements <u>with respect to the removal and disposal of the Hazardous Substances shall also be submitted</u> (JC38) to the Engineer in accordance with JSSS 1.7 [<i>Contractor's Safety Plans</i>] and JSSS 1.9 [<i>Contractor's Method Statements</i>].</p> <p>JC38: modified accordingly</p> <p>NK5/6: Will modify as commented.</p> <p>No problem. NK: confirmed.</p> <p>1.23 Permit to Work System</p> <p>1.23.1 The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.</p> <p>1.23.2 The system shall be designed to control safety for <u>Dangerous Work</u> all types of high risk work likely to be encountered, including for example: (JC39)</p> <p>JC39: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.</p> <p>NK5/6: Will modify as commented. NK: confirmed.</p> <p><u>1.23.3 Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3 Example of Dangerous Work.</u></p> <p>There is no need to change this or give any examples, please refer to the definition of Dangerous Work in Annex 1.1. If you insist, change to "for example" as in the following subclause.</p> <p>(1) Work in elevated positions, for example, transmission towers ladders and scaffolding, roof or ceiling work.</p> <p>(2) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.</p> <p>(3) Diving Works.</p>	<p>1.22.8 The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.</p> <p>1.22.9 Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.</p> <p>1.22.10 For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>].</p> <p>1.22.11 Hazardous Substances</p> <p>(1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.</p> <p>(2) The Contractor shall submit detailed Safety Plans and Method Statements with respect to the removal and disposal of the Hazardous Substances to the Engineer in accordance with JSSS 1.7 [<i>Contractor's Safety Plans</i>] and JSSS 1.9 [<i>Contractor's Method Statements</i>]</p> <p>1.23 Permit to Work System</p> <p>1.23.1 The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.</p> <p>1.23.2 The system shall be designed to control safety for Dangerous Work.</p>
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<p>ladders and scaffolding, roof or ceiling work.</p> <p>(2) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.</p> <p>(3) Diving Works.</p> <p>NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.</p> <p>I believe that this will vary according to the actual project scope and I recommend to leave as it is. It is better to be left to the discretion of the HSO.</p> <p>1.23.4. The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.</p> <p>1.23.5. Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.</p> <p>1.23.6. The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.</p> <p>1.24 Accident Response Plan</p> <p>1.24.1. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.(JC40)</p> <p>JC40: Moved to 1.24.5.</p> <p>NK5/6: Will modify as commented.</p> <p>NK-1: JICA commented to modify and add "so specified in the Specification" to 1.20.2 in Issue 6.</p> <p>(10)NK consider that "as specified in Particular Safety Specification" between "the Works," and "the Contractor" if we follow JICA's comment.</p> <p>NK-2: JICA commented that they want to use "as specified in Particular Safety Specification" more than "unless otherwise specified in Particular Safety Specification" because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSSS)</p> <p>Can you specify as JICA's request to use "as specified in PSSS?"</p> <p>1) I do not recommend any use or reliance on "as specified in PSSS". If something is then not so mentioned in PSSS, (even when it should be), this means that there is no requirement stated.</p> <p>2) "Unless otherwise specified" followed by stated requirements is the preferred and better method as the stated requirements in JSSS are then a default and even if nothing further is stated in PSSS, there will always be these requirements to rely on. This is a "failsafe" in JSSS production.</p> <p>3) More importantly, it must be understood that the availability of these facilities is a total Contractor responsibility under FIDIC (Clause 6.7), under which the</p>	<p>NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.</p> <p>I believe that this will vary according to the actual project scope and I recommend to leave as it is. It is better to be left to the discretion of the HSO.</p> <p>1.23.4 The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.</p> <p>1.23.5 Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.</p> <p>1.23.6 The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.</p> <p>1.24 Accident Response Plan</p> <p>1.24.1 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.(JC40)</p> <p>JC40: Moved to 1.24.5.</p> <p>NK5/6: Will modify as commented.</p> <p>No comment. NK: confirmed.</p> <p>NK-1: JICA commented to modify and add "so specified in the Specification" to 1.20.2 in Issue 6.</p> <p>NK consider that "as specified in Particular Safety Specification" between "the Works," and "the Contractor" if we follow JICA's comment.</p> <p>NK-2: JICA commented that they want to use "as specified in Particular Safety Specification" more than "unless otherwise specified in Particular Safety Specification" because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSSS)</p> <p>Can you specify as JICA's request to use "as specified in PSSS?"</p> <p>1) I do not recommend any use or reliance on "as specified in PSSS". If something is then not so mentioned in PSSS, (even when it should be), this means that there is no requirement stated.</p> <p>2) "Unless otherwise specified" followed by stated requirements is the preferred and better method as the stated requirements in JSSS are then a default and even if nothing further is stated in PSSS, there will always be these requirements to rely on. This is a "failsafe" in JSSS production.</p> <p>3) More importantly, it must be understood that the availability of these facilities is a total Contractor responsibility under FIDIC (Clause 6.7), under which the Contractor must provide such facilities, whether specified further by the Employer or not and the PSSS must not compromise this.</p> <p>4) The problem is that work in distant and remote places is a very common feature of JICA projects (such as hydro, water supply, power, irrigation etc.) and frequently proper health and safety facilities are just not made available by the Contractor at the Site at the expense of human life and safety. Often there are no local health authorities, or they are not equipped or not capable or they are too far away to be of any value. Very often contractors</p>	<p>1.23.3 The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.</p> <p>1.23.4 Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.</p> <p>1.23.5 The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.</p> <p>1.24 Accident Response Plan</p>
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<p>Contractor must provide such facilities, whether specified further by the Employer or not and the PSSS must not compromise this.</p> <p>4) The problem is that work in distant and remote places is a very common feature of JICA projects (such as hydro, water supply, power, irrigation etc.) and frequently proper health and safety facilities are just not made available by the Contractor at the Site at the expense of human life and safety. Often there are no local health authorities, or they are not equipped or not capable or they are too far away to be of any value. Very often contractors do not provide facilities to save money and health and safety suffers badly. This is fairly common practice and a common problem.</p> <p>5) The changes are suggested as a means of improving this situation and they should therefore be viewed against this background.</p> <p>NK-3: JICA want to clarify who "other persons who are entitled to be on the Site" are, and where "other places (if any) are.</p> <p>"other persons who are entitled to be on the Site" is from FIDIC (Clause 4.8 and others) and for whom the Contractor has responsibility for care, protection and safety. This is all-embracing and extends beyond Contractor's Personnel and Employer's Personnel to allow anyone who has a legal entitlement to be there (e.g. other contractor's, residents, others who have a right of way through the site, families of site staff if formally living there and others). I have stated this so that the extent of contractor's compliance with JSSS is clear and so that it does not diverge from the contract. I do not recommend that it is changed.</p> <p>and any other places as may be specified in the Contract as forming part of the Site comes from the definition of Site (GC 1.1.6.7) which I have already deleted throughout for clarity and for which will consider and may add an appropriate note in the User Guide.</p> <p>1.24.2. The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.</p> <p>1.24.3. Unless otherwise specified in the Particular Safety Specification, (JC41) Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site. (JC42) If so specified in the Particular Safety Specification, such medical services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.</p> <p>NK: JICA want to clarify where "other places (if any) are.</p> <p>Deleted see above</p> <p>JC41: Free of charge for everyone" need not to be as default. I don't believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!</p> <p>1) If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.</p> <p>JC42: See comment to 1.2.2 (6).</p> <p>NK5/6: Will modify as commented.</p> <p>NK5/6: YH inquired if the sentence of "the family members of all other persons" is necessary to be deleted.</p>	<p>do not provide facilities to save money and health and safety suffers badly. This is fairly common practice and a common problem.</p> <p>5) The changes are suggested as a means of improving this situation and they should therefore be viewed against this background.</p> <p>NK6/6: We advised to JICA already the above "as" and "unless". The facilities in distance is already advised in User Guide". .</p> <p>NK-3: JICA want to clarify who "other persons who are entitled to be on the Site" are, and where "other places (if any) are.</p> <p>"other persons who are entitled to be on the Site" is from FIDIC (Clause 4.8 and others) and for whom the Contractor has responsibility for care, protection and safety. This is all-embracing and extends beyond Contractor's Personnel and Employer's Personnel to allow anyone who has a legal entitlement to be there (e.g. other contractor's, residents, others who have a right of way through the site, families of site staff if formally living there and others). I have stated this so that the extent of contractor's compliance with JSSS is clear and so that it does not diverge from the contract. I do not recommend that it is changed.</p> <p>and any other places as may be specified in the Contract as forming part of the Site comes from the definition of Site (GC 1.1.6.7) which I have already deleted throughout for clarity and for which will consider and may add an appropriate note in the User Guide.</p> <p>NK6/6: confirmed.</p> <p>1.24.2 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.</p> <p>1.24.3 Unless otherwise specified in the Particular Safety Specification, (JC41) Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site. (JC42) If so specified in the Particular Safety Specification, such medical services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.</p> <p>NK: JICA want to clarify where "other places (if any) are.</p> <p>Deleted see above.</p> <p>JC41: Free of charge for everyone" need not to be as default. I don't believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!</p> <p>If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.</p> <p>JC42: See comment to 1.2.2 (6).</p> <p>NK5/6: Will modify as commented.</p> <p>NK5/6: YH inquired if the sentence of "the family members of all other persons" is necessary to be deleted.</p> <p>Yes, this applies only to remote sites as described originally in 1.24.1.</p> <p>As 1.24.1 is moved then maybe this needs to be moved also or it needs editing, "such medical services" is not then correct</p> <p>I had originally tried always to use the expression "Unless otherwise specified in the Particular Safety Specification" so what is written in JSSS is a safe default and the risk of error is therefore reduced. This has now been changed here and in 1.36 so reliance is now placed upon the PSS which I had tried to avoid.</p> <p>NK6/6: confirmed.</p>	<p>1.24.1 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.</p> <p>1.24.2 Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, for the use of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such medical services shall also be made available free of charge for the family members of the aforementioned personnel/persons.</p>
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<p>1.24.4. The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.</p> <p>1.24.5. Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example includeThe Contractor shall provide the following medical and first aid facilities:</p> <p>(1) <u>Deployment of appropriate first aid appliances, aids, instruments and medicines.</u></p> <p>(2) <u>First aid training, appointment of first aiders and dissemination of information.</u></p> <p>(3) <u>Type of communication facilities and measures for emergency response.</u></p> <p>(4) Medical staff to be assigned at the Site.</p> <p>(4) <u>Medical Facilities on the Site together with description of equipment and consumables.</u></p> <p>(5) <u>Temporary water and power supply to maintain use during mains supply failure.</u></p> <p>(6) <u>Transportation facilities. Ambulance services</u> to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.</p> <p>(7) Additional facilities specified in the Particular Safety Specification, if any.</p> <p>Medical staff to be assigned at the Site.</p> <p>(3) Emergency medic services where necessary.(JC43)</p> <p>NK: We feel that the provision of medic services seems excessive unless health insurance can cover it.</p> <p>I disagree if it means saving a life. Whether health insurance covers it or not is irrelevant. There will be situations where it is available and necessary to save life, so can JICA say that fatality is acceptable as the alternative was too expensive?</p> <p>JC43: Where the Site is located in a large distance from a sufficiently equipped hospital.</p> <p>NK5/6: Will modify as commented.</p> <p>(4)(1) Medical Facilities on the Site together with description of equipment and consumables.</p> <p>(5)(1) Temporary water and power supply to maintain use during mains supply failure.</p> <p>(6)(1) Type of communication facilities and measures for emergency response.</p> <p>(7)(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.</p> <p>1.24.6. <u>First aid training, appointment of first aiders and dissemination of information.</u></p>	<p>1.24.4 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.</p> <p>1.24.5 Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example includeThe Contractor shall provide the following medical and first aid facilities:</p> <p>(1) <u>Deployment of appropriate first aid appliances, aids, instruments and medicines.</u></p> <p>(2) <u>First aid training, appointment of first aiders and dissemination of information.</u></p> <p>(3) <u>Type of communication facilities and measures for emergency response.</u></p> <p>(1) Medical staff to be assigned at the Site.</p> <p>(4) <u>Medical Facilities on the Site together with description of equipment and consumables.</u></p> <p>(5) <u>Temporary water and power supply to maintain use during mains supply failure.</u></p> <p>(6) <u>Transportation facilities. Ambulance services</u> to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.</p> <p>(7) Additional facilities specified in the Particular Safety Specification, if any.</p> <p>Medical staff to be assigned at the Site.</p> <p>(3) Emergency medic services where necessary.(JC43)</p> <p>NK: We feel that the provision of medic services seems excessive unless health insurance can cover it.</p> <p>I disagree if it means saving a life. Whether health insurance covers it or not is irrelevant. There will be situations where it is available and necessary to save life, so can JICA say that fatality is acceptable as the alternative was too expensive?</p> <p>JC43: Where the Site is located in a large distance from a sufficiently equipped hospital.</p> <p>NK5/6: Will modify as commented.</p> <p>Your above added clause 1.24.5 is not correct contractually, is not necessary and I do not recommend that it is included, please refer to notes under 1.24.6 below.</p> <p>NK6/6: We refer to MD notes for 1.24.6.</p> <p>(4) Medical Facilities on the Site together with description of equipment and consumables.</p> <p>(5) Temporary water and power supply to maintain use during mains supply failure.</p> <p>(6) Type of communication facilities and measures for emergency response.</p> <p>(7) Deployment of appropriate first aid appliances, aids, instruments and medicines.</p> <p>1.24.10 First aid training, appointment of first aiders and dissemination of information.</p> <p>1.24.111.24.10 <u>Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional</u></p>	<p>1.24.3 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.</p> <p>1.24.4 The Contractor shall provide the following medical and first aid facilities:</p> <p>(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.</p> <p>(2) First aid training, appointment of first aiders and dissemination of information.</p> <p>(3) Type of communication facilities and measures for emergency response.</p> <p>(4) Medical Facilities on the Site together with description of equipment and consumables.</p> <p>(5) Temporary water and power supply to maintain use during mains supply failure.</p> <p>(6) Transportation facilities to be provided, to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.</p> <p>(7) Additional facilities specified in the Particular Safety Specification, if any.</p>
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1.24.7. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC44)

JC44: See comment to 1.2.2 (6)

NK5/6: Will modify as commented.

1.24.8. Where the Works include the following for example, tThe Contractor shall train selected Contractor's Personnel to perform emergency rescue operations in a safe manner in the event of any accident. Workers so trained -(JC45) are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.

JC45: Merged with 1.22.6

NK5/6: Will modify as commented.

~~(1) Work on or near existing electrical equipment, cables, wiring, services and systems.~~

~~(2) Dangerous Work such as Confine Spaces, work at height.~~

NK: We consider describing example as above.

Please see above notes and Annex 1.1 Definitions. I do not agree that any such examples are necessary —

~~(3) (1) Diving Work.-(JC46)~~

services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC44)

JC44: See comment to 1.2.2 (6)

NK5/6: Will modify as commented.

I do not recommend that your suggested changes are made.

Please refer to GC 6.7 [Health and safety] which in terms of Contractor's basic H and S obligations, should apply and prevail. This is why I had carefully worded this clause and stated "to comply with his obligations under the Contract".

By changing this to "as specified in the Particular Safety Specification" will change the basic requirements of the Contract and should not be done. Ignoring ambiguity and priorities, whatever is stated in the PSS (unless exactly the same as GC 6.7) will unnecessarily and incorrectly change the contract.

Similarly, it is not necessary to define or restrict the services and facilities to be provided as has been attempted in your added 1.24.5 above. I do not recommend that your clause is added meaning that the general requirements of GC 6.7 continue to apply.

The added clause 1.24.5 is not correct anyway as for example "ambulance service" which you have deleted is a requirement of the contract anyway.

To assist the Contractor with his Bid, I had suggested that the Employer/consultant may wish to assist the Contractor by stating actual site requirements in the PSS but not amending the basic requirements of the contract in the process.

On balance I do not see why any real change is necessary to this clause and what is suggested is confusing rather than improving.

NK6/6: We got your notes, however it seems difficult to specify requirements for all contractors from small to large project, or in excessively far distance from town. I think it shall be specified in in PSS.

~~1.24.12 1.24.11 Where the Works include the following for example, tThe Contractor shall train selected Contractor's Personnel to perform emergency rescue operations in a safe manner in the event of any accident. Workers so trained -(JC45) are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.~~

JC45: Merged with 1.22.6

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

~~(1) Work on or near existing electrical equipment, cables, wiring, services and systems.~~

~~(2) Dangerous Work such as Confine Spaces, work at height.~~

NK: We consider describing example as above.

Please see above notes and Annex 1.1 Definitions. I do not agree that any such examples are necessary —

~~(3) Diving Work.-(JC46)~~

JC46: Diving work is also Dangerous Work

NK5/6: We cannot understand how to this comment (JC46). To MD, please review this comment.

~~(4) Similar special circumstances.~~

1.24.5 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.

1.24.6 The Contractor shall train selected Contractor's Personnel to perform emergency rescue in a safe manner in the event of any accident. Workers so trained are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.

<p>JC46: Diving work is also Dangerous Work</p> <p>NK5/6: We cannot understand how to this comment (JC46). To MD, please review this comment.</p> <p>(4) Similar special circumstances.</p> <p>1.24.9. <u>Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.</u> (JC47)</p> <p>JC47: Move from 1.22.</p> <p><u>This should be "may" since the nature of Works may vary.</u></p> <p>NK5/6: To MD, please review this comment.</p> <p>1.24.10. <u>If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.</u> (JC48)</p> <p>JC48: Move from 1.22.</p> <p>NK5/6: Will modify as commented.</p> <p>1.24.11. <u>All rescue team members/Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].</u></p> <p>1.24.12. <u>Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].</u></p> <p>NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.</p> <p><u>Better to delete reference here "as recommended by OSHA" and include your clear requirements in JSSS 2.9 [PP and First Aid].</u> (JC49)</p> <p>JC49: Agree.</p> <p>NK5/6: Will modify as agreed.</p> <p>1.25 Measures at the Time Accidents Occur</p> <p>1.25.1. When an accident occurs, <u>the HSO the Contractor</u> shall immediately discontinue the concerned work, <u>inform the Engineer</u> and take all efforts to:</p> <p>NK: JICA added in the last comment.</p> <p>NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6. (JC50)</p> <p><u>I disagree completely and do not recommend this (or any such) change . As I have explained repeatedly, the HSO must have this authority in order to fulfil his safety control functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible.</u></p>	<p>1.24.13 1.24.12 <u>Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.</u> (JC47)</p> <p>JC47: Move from 1.22.</p> <p><u>This should be "may" since the nature of Works may vary.</u></p> <p>NK5/6: To MD, please review this comment.</p> <p><u>I am informed that my comment is not required on "blue" shaded items</u></p> <p><u>It should be "shall", because where the nature of the Works so dictates, it "shall" be provided not "may" otherwise compliance appears optional, which is not the intention.</u></p> <p>NK6/6: confirmed.</p> <p>1.24.14 24.13 <u>If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.</u> (JC48)</p> <p>JC48: Move from 1.22.</p> <p>NK5/6: Will modify as commented.</p> <p><u>I am informed that my comment is not required on "blue" shaded items, therefore none is provided.</u></p> <p>NK: confirmed moved from 1.22.7.</p> <p>1.24.15 24.14 <u>All rescue team members/Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].</u></p> <p>1.24.16 24.15 <u>Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].</u></p> <p>NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.</p> <p><u>Better to delete reference here "as recommended by OSHA" and include your clear requirements in JSSS 2.9 [PP and First Aid].</u> (JC49)</p> <p>JC49: Agree.</p> <p>NK5/6: Will modify as agreed.</p> <p><u>No comment.</u></p> <p>1.25 Measures at the Time Accidents Occur</p> <p>1.25.1 When an accident occurs, <u>the HSO the Contractor</u> shall immediately discontinue the concerned work, <u>inform the Engineer</u> and take all efforts to:</p> <p>NK: JICA added in the last comment.</p> <p>NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6. (JC50)</p> <p><u>I disagree completely and do not recommend this (or any such) change . As I have explained repeatedly, the HSO must have this authority in order to fulfil his safety control functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible.</u></p> <p>JC50: Agree.</p> <p>NK5/6: Will modify as agreed.</p> <p><u>For the purposes of safety, the HSO must immediately take this action when he is aware of it and this should remain as his duty, not the contractor as you suggest. The interests are different and if immediate action by HSO is not taken, it should be the HSO that is held responsible.</u></p> <p>NK6/6: Understood your opinion. It needs to explain why NK changed opinion to JICA.</p>	<p>1.24.7 Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.</p> <p>1.24.8 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.</p> <p>1.24.9 Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].</p> <p>1.24.10 Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid]</p> <p>1.25 Measures at the Time Accidents Occur</p> <p>1.25.1 When an accident occurs, <u>the HSO</u> shall immediately discontinue the concerned work, <u>inform the Engineer</u> and take all efforts to:</p> <p>(NK6/6: This is the duty of the HSO, so replaced from the Contractor to the HSO to make who take actions in the Contractor at accident clear as specified in 1.13 HSO - Scope of Duties and Authority, 1.13.2 (1) (d) Temporarily stopping the Works or any part of the Works following any accident... and (g) Preparing proposals, reporting and consulting with the Engineer, ...).</p>
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<p>JC50: Agree. NK5/6: Will modify as agreed.</p> <p>(1) Safely locate and extract casualties. (2) Provide first aid treatment at the Site. (3) Implement Secondary accident prevention activities, including: (a) Preserving the accident site, make safe and prevent anyone interfering or entering; (b) Discontinuing construction work related to or in the vicinity of the accident; and (c) Implementing any further measures instructed by the Engineer.</p> <p>1.25.2. Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures. (1) The Contractor shall inform the Engineer and submit details of any accident. (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer. (3) The Accident Report shall include details of the HSO's the Contractor's recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].</p> <p>Please see above notes on this subject. This should remain as the HSO. I disagree and do not recommend this (or any such) change</p> <p>1.25.3. For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].</p> <p>1.26 Emergency Response Plan</p> <p>1.26.1. <u>To the extent reasonably possible</u>, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and <u>as far as reasonably possible</u>, shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.</p> <p>The Contractor shall the take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have and to reasonably avoided, or overcome or lessened the effects <u>to a reasonable extent</u>. (JC51)</p> <p>NK-1: Can we delete one of two "reasonably possible" above? Yes, delete as above</p> <p>NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).</p>	<p>(1) Safely locate and extract casualties. (2) Provide first aid treatment at the Site. (3) Implement Secondary accident prevention activities, including: (a) Preserving the accident site, make safe and prevent anyone interfering or entering; (b) Discontinuing construction work related to or in the vicinity of the accident; and (c) Implementing any further measures instructed by the Engineer.</p> <p>1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures. (1) The Contractor shall inform the Engineer and submit details of any accident. (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer. (3) The Accident Report shall include details of the HSO's the Contractor's recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].</p> <p>Please see above notes on this subject. This should remain as the HSO. I disagree and do not recommend this (or any such) change</p> <p>NK6/6: Understood your opinion. It needs to explain why NK changed opinion to JICA.</p> <p>1.25.3 For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].</p> <p>1.26 Emergency Response Plan</p> <p>1.26.1 <u>To the extent reasonably possible</u>, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and as far as reasonably possible, shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.</p> <p>The Contractor shall the take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have and to reasonably avoided, or overcome or lessened the effects <u>to a reasonable extent</u>. (JC51)</p> <p>NK-1: Can we delete one of two "reasonably possible" above? Yes, delete as above NK confirmed.</p> <p>NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).</p> <p>With the changes to your draft that have now been agreed, I have already modified JSS 2.7 and I thought that the above can now be deleted as shown, however your later comments against 1.26.5 are confusing me greatly and I am unsure. Can you please answer my request against 1.26.5 first and I can then modify the above if necessary.</p> <p>JC51: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.</p> <p>NK5/6: Will modify as commented.</p>	<p>(1) Safely locate and extract casualties. (2) Provide first aid treatment at the Site. (3) Implement Secondary accident prevention activities, including: (a) Preserving the accident site, make safe and prevent anyone interfering or entering; (b) Discontinuing construction work related to or in the vicinity of the accident; and (c) Implementing any further measures instructed by the Engineer.</p> <p>1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures. (1) The Contractor shall inform the Engineer and submit details of any accident. (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer. (3) The Accident Report shall include details of the HSO's recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].</p> <p>1.25.3 For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].</p> <p>1.26 Emergency Response Plan</p> <p>1.26.1 To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.</p> <p>The Contractor shall take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, and to avoid, overcome or lessen the effects to a reasonable extent.</p>
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With the changes to your draft that have now been agreed, I have already modified JSS 2.7 and I thought that the above can now be deleted as shown, however your later comments against 1.26.5 are confusing me greatly and I am unsure. Can you please answer my request against 1.26.5 first and I can then modify the above if necessary.

JC51: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.

NK5/6: Will modify as commented.

1.26.2. The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

It is perfectly correct as it is however have split it. (JC52)

JC52: Thank you for being non-native friendly.

FIDIC 1999 and MDB version have been supported worldwide because of its "understandability". Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

NK5/6: No comment.

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.26.3. Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage and flooding arising from such flooding, earthquake or volcanic activity.

NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.

Yes this can be changed as above

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and (JC53) to any third parties and neighbours and property not connected with the Works but potentially affected thereby.

JC53: See 1.2.2 (6).

NK5/6: Will modify as commented.

I give no further comment.

1.26.2 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

It is perfectly correct as it is however have split it. (JC52)

JC52: Thank you for being non-native friendly.

FIDIC 1999 and MDB version have been supported worldwide because of its "understandability". Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

NK5/6: No comment.

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

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NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.

Yes this can be changed as above. NK: confirmed.

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and (JC53) to any third parties and neighbours and property not connected with the Works but potentially affected thereby.

JC53: See 1.2.2 (6).

NK5/6: Will modify as commented.

No comment.

- (2) Provision of temporary support to all sides and soffits of excavations or portal of portal of (JC54) tunnelling of sufficient strength, durability and suitability.

1.26.2 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.26.3 Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage from such flooding, earthquake or volcanic activity.

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and to any third parties and neighbours and property not connected with the Works but potentially affected thereby.

<p>(2) Provision of temporary support to all sides and soffits of excavations or portal of portal of (JC54) tunnelling of sufficient strength, durability and suitability.</p> <p>NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel.</p> <p>My recommendation is still (as written) to leave it as it was and make this as wide a term as possible to increase the coverage. There is no acceptable definition of "portal" and this change just introduces argument on interpretation, why change?</p> <p>NK: We accept to leave as it is</p> <p>JC54: Better to add.</p> <p>NK5/6: Will modify as commented.</p> <p>(3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.</p> <p>1.26.4. Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [<i>Contractor's General Obligations</i>] and JSSS 1.9 [<i>Contractor's Method Statements</i>].</p> <p>1.26.5. Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.</p> <p>This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract. (JC55)</p> <p>NK: We consider that the Contractor may have difficulty to assume what activities can be made.</p> <p>We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.</p> <p>Which underlining? In 1.26.1</p> <p>Please see 1.26.6 for my assumption of your requirements.</p> <p>Your draft has never been clear to me and I am still having difficulty to understand what your draft means and what are your intentions and requirements.</p> <p>Please note:</p> <ol style="list-style-type: none"> 1) The Contractor can only plan for what he can reasonably foresee or anticipate and 2) It is necessary to state this so that no confusion is introduced with FIDIC GC 19 3) This only leaves simple search and contact activities which has little or no meaning <p>JSSS cannot specify what other measures the Contractor is to take after a Force majeure event (which I guess your emergency plan is trying to cover) as these events and any counter measures cannot be predicted.</p> <p>Please can you clarify exactly what you are requiring the Contractor to do in the event of an earthquake, hurricane, typhoon or volcanic activity, so I can finalise this clause and also JSSS 2.7.</p> <p>JC55: Better to jump to 1.26.6 without this.</p>	<p>NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel.</p> <p>My recommendation is still (as written) to leave it as it was and make this as wide a term as possible to increase the coverage. There is no acceptable definition of "portal" and this change just introduces argument on interpretation, why change?</p> <p>NK: We accept to leave as it is</p> <p>JC54: Better to add.</p> <p>NK5/6: Will modify as commented.</p> <p>No comment</p> <p>(3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.</p> <p>1.26.4 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [<i>Contractor's General Obligations</i>] and JSSS 1.9 [<i>Contractor's Method Statements</i>].</p> <p>1.26.5 Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.</p> <p>This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract. (JC55)</p> <p>NK: We consider that the Contractor may have difficulty to assume what activities can be made.</p> <p>We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.</p> <p>Which underlining? In 1.26.1</p> <p>Please see 1.26.6 for my assumption of your requirements</p> <p>Your draft has never been clear to me and I am still having difficulty to understand what your draft means and what are your intentions and requirements.</p> <p>Please note:</p> <ol style="list-style-type: none"> 1) The Contractor can only plan for what he can reasonably foresee or anticipate and 2) It is necessary to state this so that no confusion is introduced with FIDIC GC 19 3) This only leaves simple search and contact activities which has little or no meaning <p>JSSS cannot specify what other measures the Contractor is to take after a Force majeure event (which I guess your emergency plan is trying to cover) as these events and any counter measures cannot be predicted.</p> <p>Please can you clarify exactly what you are requiring the Contractor to do in the event of an earthquake, hurricane, typhoon or volcanic activity, so I can finalise this clause and also JSSS 2.7.</p> <p>JC55: Better to jump to 1.26.6 without this.</p> <p>NK5/6: Will modify as commented.</p> <p>No further comment</p> <p>1.26.6 The Emergency Response Plan, shall cover:</p>	<p>(2) Provision of temporary support to all sides and soffits of excavations or portal of tunnelling of sufficient strength, durability and suitability</p> <p>(3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.</p> <p>1.26.4 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [<i>Contractor's General Obligations</i>] and JSSS 1.9 [<i>Contractor's Method Statements</i>].</p> <p>1.26.5 Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.</p>
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NK5/6: Will modify as commented.

1.26.6. The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels.

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

1.26.7. The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.26.8. Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site. (JC56)

JC56: See 1.2.2(6).

NK5/6: To Md, please review this comment.

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
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The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.26.8 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

~~Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site. (JC56)~~

JC56: See 1.2.2(6).

NK5/6: To Md, please review this comment.

This is connected with the provision of health and safety measures as referred to in 1.2.2 (6) and can be deleted to be compatible.

NK6/6: confirmed.

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.26.6 The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels.

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

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- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.26.8 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

<p>Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.</p> <p>1.26.9. If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.</p> <p>1.26.10. The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.</p> <p>1.26.11. For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].</p> <p>1.27 Contractor's Safety Committee and Regular Safety Meetings</p> <p>1.27.1. The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.</p> <p>1.27.2. Members of the Contractor's Safety Committee shall include:</p> <ol style="list-style-type: none"> (1) Contractor's Representative. (2) HSO. (3) Medical and first aid staff. (4) Contractor's senior site staff. (5) Contractor's head office safety manager (as necessary). (6) Subcontractors' representatives, health and safety personnel, site staff. (7) Representative of <u>labour union, if any Contractor's Personnel.</u> (8) (If necessary) Representatives of the relevant government authorities and agencies. (9) Any other necessary personnel. <p>1.27.3. The HSO shall be the chairman of the Safety Committee.</p> <p>1.27.4. The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:</p> <ol style="list-style-type: none"> (1) Frequency of the meetings: At least once a month. (2) Agenda: <ol style="list-style-type: none"> (a) Hazards, safety and health problems identified by any members of the Safety Committee; (b) Monthly or weekly schedule of important health and safety matters; (c) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence; <p>NK: Are the phrases in red to be added? Is this sort of comment really necessary? Yes it can be changed but this is only an abbreviated sample agenda.</p> <ol style="list-style-type: none"> (d) Feedback on the regular safety, coordination and other meetings with the Engineer; 	<p>1.26.9 If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.</p> <p>1.26.10 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.</p> <p>1.26.11 For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].</p> <p>1.27 Contractor's Safety Committee and Regular Safety Meetings</p> <p>1.27.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.</p> <p>1.27.2 Members of the Contractor's Safety Committee shall include:</p> <ol style="list-style-type: none"> (1) Contractor's Representative. (2) HSO. (3) Medical and first aid staff. (4) Contractor's senior site staff. (5) Contractor's head office safety manager (as necessary). (6) Subcontractors' representatives, health and safety personnel, site staff. (7) Representative of <u>labour union, if any Contractor's Personnel.</u> (8) (If necessary) Representatives of the relevant government authorities and agencies. (9) Any other necessary personnel. <p>1.27.3 The HSO shall be the chairman of the Safety Committee.</p> <p>1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:</p> <ol style="list-style-type: none"> (1) Frequency of the meetings: At least once a month. (2) Agenda: <ol style="list-style-type: none"> (a) Hazards, safety and health problems identified by any members of the Safety Committee; (b) Monthly or weekly schedule of important health and safety matters; (c) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence; <p>NK: Are the phrases in red to be added? Is this sort of comment really necessary? Yes it can be changed but this is only an abbreviated sample agenda.</p> <p>NK6/6: confirmed.</p> <ol style="list-style-type: none"> (d) Feedback on the regular safety, coordination and other meetings with the Engineer; (e) Safety instructions received from the Engineer; 	<p>Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.</p> <p>1.26.9 If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.</p> <p>1.26.10 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.</p> <p>1.26.11 For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].</p> <p>1.27 Contractor's Safety Committee and Regular Safety Meetings</p> <p>1.27.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.</p> <p>1.27.2 Members of the Contractor's Safety Committee shall include:</p> <ol style="list-style-type: none"> (1) Contractor's Representative. (2) HSO. (3) Medical and first aid staff. (4) Contractor's senior site staff. (5) Contractor's head office safety manager (as necessary). (6) Subcontractors' representatives, health and safety personnel, site staff. (7) Representative of labour union, if any. (8) (If necessary) Representatives of the relevant government authorities and agencies. (9) Any other necessary personnel. <p>1.27.3 The HSO shall be the chairman of the Safety Committee.</p> <p>1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:</p> <ol style="list-style-type: none"> (1) Frequency of the meetings: At least once a month. (2) Agenda: <ol style="list-style-type: none"> (a) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence; (b) Monthly or weekly schedule of important health and safety matters; <ol style="list-style-type: none"> (c) Feedback on the regular safety, coordination and other meetings with the Engineer; (d) Safety instructions received from the Engineer;
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<p>(e) Safety instructions received from the Engineer;</p> <p>(f) Items to be coordinated with police, fire department and other related organisations;</p> <p>(g) Compliance and registration requirements under the Laws of the Country;</p> <p>(h) Safety and health awards, media attention and the like; and</p> <p>(i) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(j) Other matters.</p> <p>NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion. Again, is this sort of comment really necessary? I have changed this</p> <p>1.27.5. Report on the Safety Committee Meetings</p> <p>The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.</p> <p>1.28 Engineer's Regular Safety Meetings</p> <p>1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:</p> <p>(1) Frequency of the meetings: Once a month.</p> <p>(2) Agenda:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(b) Monthly or weekly schedule of important health and safety matters;</p> <p>(c) Accidents, fatalities, injuries in the previous month and measures to be taken to prevent any reoccurrence;</p> <p>NK: Are the phrases in red to be added? Ditto above. Is the sequence here acceptable or shall it change as above?</p> <p>(d) Hazards, safety and health problems identified by any members of the Safety Committee;</p> <p>(e) Status of resolution of previous problems;</p> <p>(f) Items to be coordinated with police, fire department and other related organisations;</p> <p>(g) Compliance and registration requirements under the Laws of the Country; and</p> <p>(h) Safety and health awards, media attention and the like.</p>	<p>(f) Items to be coordinated with police, fire department and other related organisations;</p> <p>(g) Compliance and registration requirements under the Laws of the Country;</p> <p>(h) Safety and health awards, media attention and the like; and</p> <p>(i) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(j) Other matters.</p> <p>NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion. Again, is this sort of comment really necessary? I have changed this. NK: modified as requested by JICA.</p> <p>1.27.5 Report on the Safety Committee Meetings</p> <p>The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.</p> <p>1.28 Engineer's Regular Safety Meetings</p> <p>1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:</p> <p>(1) Frequency of the meetings: Once a month.</p> <p>(2) Agenda:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(b) Monthly or weekly schedule of important health and safety matters;</p> <p>(c) Accidents, fatalities, injuries in the previous month and measures to be taken to prevent any reoccurrence;</p> <p>NK: Are the phrases in red to be added? Ditto above. Is the sequence here acceptable or shall it change as above? NK6/6: changed as requested.</p> <p>(d) Hazards, safety and health problems identified by any members of the Safety Committee;</p> <p>(e) Status of resolution of previous problems;</p> <p>(f) Items to be coordinated with police, fire department and other related organisations;</p> <p>(g) Compliance and registration requirements under the Laws of the Country; and</p> <p>(h) Safety and health awards, media attention and the like.</p> <p>1.28.2 Report on the Engineer's Regular Safety Meetings:</p>	<p>(e) Items to be coordinated with police, fire department and other related organisations;</p> <p>(f) Compliance and registration requirements under the Laws of the Country;</p> <p>(g) Safety and health awards, media attention and the like;</p> <p>(h) Hazards, safety and health problems identified by any members of the Safety Committee;</p> <p>(i) Effectiveness of existing Safety Plans and suggestions for revision and improvement; and</p> <p>(j) Other matters.</p> <p>1.27.5 Report on the Safety Committee Meetings</p> <p>The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.</p> <p>1.28 Engineer's Regular Safety Meetings</p> <p>1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:</p> <p>(1) Frequency of the meetings: Once a month.</p> <p>(2) Agenda:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(b) Monthly or weekly schedule of important health and safety matters;</p> <p>(c) Accidents, fatalities, injuries in the previous month and measures to be taken to prevent any reoccurrence;</p> <p>(d) Hazards, safety and health problems identified by any members of the Safety Committee;</p> <p>(e) Status of resolution of previous problems;</p> <p>(f) Items to be coordinated with police, fire department and other related organisations;</p> <p>(g) Compliance and registration requirements under the Laws of the Country; and</p> <p>(h) Safety and health awards, media attention and the like.</p>
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<p>1.28.2 Report on the Engineer's Regular Safety Meetings:</p> <ol style="list-style-type: none"> (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above. (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings. (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer. (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract. (5) The Engineer shall issue a formal instruction for any variation requests. <p>1.29 Project Safety Committee</p> <p>1.29.1. On larger Projects with multiple contract packages and contractors and unless otherwise stated in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.</p> <p>1.29.2. Unless otherwise agreed, the members of the Project Safety Committee shall include:</p> <ol style="list-style-type: none"> (1) The Employer. (2) The Engineer(s). (3) The Contractor's Representative(s). (4) Health and Safety Officers of all members. <p>1.29.3. The Chairman of the Safety Committee shall be the Employer.</p> <p>1.29.4. The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.</p> <p>NK: JICA commented to delete this as holding meetings are <u>not monthly basis but optional</u>.</p> <p>We propose "periodically as requested by the Employer" and ask you to reply to this comment as reply is not mentioned in the document with notes.</p> <p>Please clarify what you want to be deleted.</p> <p>NK: Deletion is "on monthly basis".</p> <p>1.29.5. The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.</p> <p>NK: JICA commented to replace "shall" with "may" in Clauses 1.29.3 to 1.29.5.</p> <p>We want to ask you to reply to this comment as reply is not mentioned in the document with notes.</p> <p>Please note that I have already edited the first paragraph to state "unless otherwise specified."</p> <p>With this change I think that no other change is necessary.</p> <p>1.30 Health and Safety Coordination with Other Contractors</p> <p>NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer.</p>	<ol style="list-style-type: none"> (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above. (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings. (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer. (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract. (5) The Engineer shall issue a formal instruction for any variation requests. <p>1.29 Project Safety Committee</p> <p>1.29.1 On larger Projects with multiple contract packages and contractors and unless otherwise stated in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.</p> <p>1.29.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:</p> <ol style="list-style-type: none"> (1) The Employer. (2) The Engineer(s). (3) The Contractor's Representative(s). (4) Health and Safety Officers of all members. <p>1.29.3 The Chairman of the Safety Committee shall be the Employer.</p> <p>1.29.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.</p> <p>NK: JICA commented to delete this as holding meetings are <u>not monthly basis but optional</u>.</p> <p>We propose "periodically as requested by the Employer" and ask you to reply to this comment as reply is not mentioned in the document with notes.</p> <p>Please clarify what you want to be deleted.</p> <p>NK: Deletion is "on monthly basis".</p> <p>NK6/6: We agree no change.</p> <p>1.29.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.</p> <p>NK: JICA commented to replace "shall" with "may" in Clauses 1.29.3 to 1.29.5.</p> <p>We want to ask you to reply to this comment as reply is not mentioned in the document with notes.</p> <p>Please note that I have already edited the first paragraph to state "unless otherwise specified."</p> <p>With this change I think that no other change is necessary.</p> <p>NK: confirmed modification.</p> <p>1.30 Health and Safety Coordination with Other Contractors</p> <p>NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer.</p> <p>We propose to move them to the User Guide.</p>	<p>1.28.2 Report on the Engineer's Regular Safety Meetings:</p> <ol style="list-style-type: none"> (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above. (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings. (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer. (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract. 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(4) Health and Safety Officers of all members. <p>1.29.3 The Chairman of the Safety Committee shall be the Employer.</p> <p>1.29.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.</p> <p>1.29.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.</p> <p>1.30 Health and Safety Coordination with Other Contractors</p>
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<p>We propose to move them to the User Guide.</p> <p>I disagree, this affects the Contractor also and it is important that it is stated here so that there is common and very clear legal agreement between Employer and Contractor on who does what.</p> <p>I think that this requires mention in both JSSS and the User Guide to avoid future dispute.</p> <p>Please also note my understanding that the User Guide is not a part of the Contract and please let me know if you require differently.</p> <p>1.30.1. Refer to GC 2.3 [Employer's Personnel] and GC 4.6 [Co-operation] regarding the respective obligations and requirements for the Contractor regarding cooperation with:</p> <ol style="list-style-type: none"> (1) the Employer's Personnel, (2) any other contractors employed by the Employer, (3) the personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract. <p>In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [Safety Procedures] and GC 4.18 [Protection of the Environment].</p> <p>The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.</p> <p>When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.</p> <p>When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.</p> <p>1.30.2. The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.</p> <p>1.30.3. If any other contractors are employed by the Employer or if any legally constituted public authorities responsible to the Employer is working on</p>	<p>I disagree, this affects the Contractor also and it is important that it is stated here so that there is common and very clear legal agreement between Employer and Contractor on who does what.</p> <p>I think that this requires mention in both JSSS and the User Guide to avoid future dispute.</p> <p>Please also note my understanding that the User Guide is not a part of the Contract and please let me know if you require differently.</p> <p>NK6/6: JICA had not comment to 1.30.1 and 1.30.2, so we leaves them as they are.</p> <p>1.30.1 Refer to GC 2.3 [Employer's Personnel] and GC 4.6 [Co-operation] regarding the respective obligations and requirements for the Contractor regarding cooperation with:</p> <ol style="list-style-type: none"> (1) the Employer's Personnel, (2) any other contractors employed by the Employer, (3) the personnel of any relevant authorities legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract. <p>I have now given definition to "relevant authorities" and therefore suggest the above correction.</p> <p>NK6/6: confirmed.</p> <p>In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [Safety Procedures] and GC 4.18 [Protection of the Environment].</p> <p>The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.</p> <p>When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. 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The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.</p> <p>When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.</p> <p>1.30.2 The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.</p> <p>1.30.3 If any other contractors are employed by the Employer or if any relevant authorities legally constituted public authorities responsible to the Employer are working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:</p>	<p>1.30.1 Refer to GC 2.3 [Employer's Personnel] and GC 4.6 [Co-operation] regarding the respective obligations and requirements for the Contractor regarding cooperation with:</p> <ol style="list-style-type: none"> (1) the Employer's Personnel, (2) any other contractors employed by the Employer, (3) the personnel of any relevant authorities who may be employed in the execution on or near the Site of any work not included in the Contract. <p>In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [Safety Procedures] and GC 4.18 [Protection of the Environment].</p> <p>The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.</p> <p>When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. 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<p>or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:</p> <ol style="list-style-type: none"> (1) Frequency of the meetings: as and when considered necessary by Engineer. (2) Unless otherwise agreed, attendees shall include representatives of: <ol style="list-style-type: none"> (a) The Employer; (b) The Contractor; (c) Other contractors employed by the Employer; and (d) Personnel of any legally constituted public authorities. <p>NK: We considers it is easy to understand attendee by adding "who may be employed in the execution on or near the Site of any work not included in the Contract." to (d) though it mentioned in the first sentence.</p> <p>I don't understand your comment, please advise what change you require.</p> <ol style="list-style-type: none"> (3) Agenda should relate to coordination among different contractors including for example: <ol style="list-style-type: none"> (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement; (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities; (c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence; (d) Status of resolution of previous problems; (e) Items to be coordinated with police, fire department and other related organisations; (f) Compliance and registration requirements under the Laws of the Country; (g) Safety and health awards, media attention and the like; and (h) Other matters. <p>1.30.4. Report on the Health and Safety Coordination Meetings:</p> <ol style="list-style-type: none"> (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above. (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting. (3) A further copy shall be included in the Engineer's monthly progress report. (JC57) 	<ol style="list-style-type: none"> (1) Frequency of the meetings: as and when considered necessary by Engineer. (2) Unless otherwise agreed, attendees shall include representatives of: <ol style="list-style-type: none"> (a) The Employer; (b) The Contractor; (c) Other contractors employed by the Employer; and (d) Personnel of any relevant authorities legally constituted public authorities. <p>NK: We considers it is easy to understand attendee by adding "who may be employed in the execution on or near the Site of any work not included in the Contract." to (d) though it mentioned in the first sentence.</p> <p>I don't understand your comment, please advise what change you require.</p> <p>I have now given definition to "relevant authorities" and therefore suggest the above correction.</p> <p>NK6/6: confirmed.</p> <ol style="list-style-type: none"> (3) Agenda should relate to coordination among different contractors including for example: <ol style="list-style-type: none"> (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement; (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any relevant authorities any legally constituted public authorities; (c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence; (d) Status of resolution of previous problems; (e) Items to be coordinated with police, fire department and other related organisations; (f) Compliance and registration requirements under the Laws of the Country; (g) Safety and health awards, media attention and the like; and (h) Other matters. <p>1.30.4 Report on the Health and Safety Coordination Meetings:</p> <ol style="list-style-type: none"> (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above. (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting. (3) A further copy shall be included in the Engineer's monthly progress report. (JC57) <p>JC57: Engineer's monthly progress report is normally not shared with the Contractor. Delete "Engineer's" to mean Contractor's progress report.</p> <p>NK5/6: Will modify as commented.</p>	<p>any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:</p> <ol style="list-style-type: none"> (1) Frequency of the meetings: as and when considered necessary by Engineer. (2) Unless otherwise agreed, attendees shall include representatives of: <ol style="list-style-type: none"> (a) The Employer; (b) The Contractor; (c) Other contractors employed by the Employer; and (d) Personnel of any relevant authorities. <ol style="list-style-type: none"> (3) Agenda should relate to coordination among different contractors including for example: <ol style="list-style-type: none"> (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement; (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any relevant authorities; (c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence; (d) Status of resolution of previous problems; (e) Items to be coordinated with police, fire department and other related organisations; (f) Compliance and registration requirements under the Laws of the Country; (g) Safety and health awards, media attention and the like; and (h) Other matters. <p>1.30.4 Report on the Health and Safety Coordination Meetings:</p> <ol style="list-style-type: none"> (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above. (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting. (3) A further copy shall be included in the monthly progress report.
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JC57: Engineer's monthly progress report is normally not shared with the Contractor.
Delete "Engineer's" to mean Contractor's progress report.

NK5/6: Will modify as commented.

1.31 Safety Statistics

1.31.1. The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.31.2. Actual statistics shall include the following:

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, ~~casualties~~, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff.
- (9) Number of Contractor's safety meetings and frequency.
- (10) Number of **candidates** given safety induction and other training.

NK: Are "candidates" replaced with "Contractor's Personnel"?

No, they are all candidates for training and can include others e.g. Employer's Personnel and others, etc.

- (11) Number of safety inspections,
- (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (13) Instructions issued for unsafe behaviour or unsafe site conditions.
- (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (15) Engineer's Instructions issued for work suspension.
- (16) HSO instructions issued for work stoppage. (JC58)
- (17) Others.

JC58: Statistics and Records are mixed.

1 to 3 and 5 relate to statistics.

4 and 6 to 16 relate to records.

It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32".

By doing this, things will be streamlined : "statistics → records → their reporting"

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided NK6/6: confirmed.

1.31 Safety Statistics

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- (9) Number of Contractor's safety meetings and frequency.
- (10) Number of **candidates** given safety induction and other training.

NK: Are "candidates" replaced with "Contractor's Personnel"?

No, they are all candidates for training and can include others e.g. Employer's Personnel and others, etc. NK: confirmed.

- (11) Number of safety inspections,
- (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (13) Instructions issued for unsafe behaviour or unsafe site conditions.
- (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (15) Engineer's Instructions issued for work suspension.
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By doing this, things will be streamlined : "statistics → records → their reporting"

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

NK6/6: We modified based on the above comment JC58. Changed order 1.32 and 1.33. We selected statics items which shall be submitted in daily safety report.

1.31 Safety Statistics

1.31.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

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- (5) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.
- (6) Number of health and safety staff.
- (7) Number of candidates given safety induction and other training.
- (8) Number of safety inspections,
- (9) Number of detections of non-compliant, unsafe or lack of Contractor's Equipment.
- (10) Number of instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (11) Number of Engineer's Instructions issued for work suspension.
- (12) Number of HSO instructions issued for work stoppage.
- (13) Others.

1.31.3 All data shall be in a format and content given consent by the Engineer.

1.31.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.31.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].

1.32 Health and Safety Records

1.32.1 The Contractor shall keep health and safety records for the following:

- (1) Inspection records and checklists.
- (2) Meetings for safety and health management.
- (3) Monitoring of safety and health management activities.
- (4) Health and safety education and training for the Contractor's Personnel.
- (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and

<p>1.31.3. All data shall be in a format and content given consent by the Engineer.</p> <p>1.31.4. The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.</p> <p>1.31.5. The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [<i>Safety Reports</i>].</p> <p>1.32 Safety Reports</p> <p>1.32.1. The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:</p> <p>(1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.</p> <p>NK Is it necessary to add "for"?</p> <p>Yes, it can be</p> <p>(2) Contractor/HSO and Joint Site Safety Inspections.(JC59)</p> <p>JC59:Joint Site Safety Inspection Report ?</p> <p>NK5/6: Will modify as commented.</p> <p>(3) Weekly Safety Report: summary of safety matters of the week.</p> <p>(4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [<i>Progress Reports</i>].</p> <p>1.33 Health and Safety Records</p> <p>1.33.1. The Contractor shall keep health and safety records for the following:</p> <p>(1) Accidents, fatalities, near-misses.</p> <p>(2) Inspection records and checklists.</p> <p>(3) Meetings for safety and health management.</p> <p>(4) Monitoring of safety and health management activities.</p> <p>(5) Health and safety education and training for the Contractor's Personnel.</p>	<p>1.31.3 All data shall be in a format and content given consent by the Engineer.</p> <p>1.31.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.</p> <p>1.31.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [<i>Safety Reports</i>].</p> <p>1.32 Safety Reports</p> <p>1.32.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:</p> <p>(1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.</p> <p>NK Is it necessary to add "for"?</p> <p>Yes, it can be. Confirmed.</p> <p>(2) Contractor/HSO and Joint Site Safety Inspections.(JC59)</p> <p>JC59:Joint Site Safety Inspection Report ?</p> <p>NK5/6: Will modify as commented. Confirmed.</p> <p>(3) Weekly Safety Report: summary of safety matters of the week.</p> <p>(4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [<i>Progress Reports</i>].</p> <p>1.33 Health and Safety Records</p> <p>1.33.1 The Contractor shall keep health and safety records for the following:</p> <p>(1) Accidents, fatalities, near-misses.</p> <p>(2) Inspection records and checklists.</p> <p>(3) Meetings for safety and health management.</p> <p>(4) Monitoring of safety and health management activities.</p> <p>(5) Health and safety education and training for the Contractor's Personnel.</p> <p>(6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and</p>	<p>medical examination results) shall be stored in compliance with the Laws of the Country.</p> <p>(6) Work environment records and other records required by JSSS Chapter 2 [<i>General Safety Measures</i>] and other parts of JSSS.</p> <p>(7) Record of reports as may be required by government authorities.</p> <p>(8) Detection of non-compliant, unsafe or lack of Contractor's Equipment.</p> <p>(9) Instructions issued for unsafe behaviour or unsafe site conditions.</p> <p>(10) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.</p> <p>(11) Engineer's Instructions issued for work suspension.</p> <p>(12) HSO instructions issued for work stoppage.</p> <p>(13) Others</p> <p>1.32.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.32.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [<i>Safety Reports</i>].</p> <p>1.33 Safety Reports</p> <p>1.33.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:</p> <p>(1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.</p> <p>(2) Contractor/HSO and Joint Site Safety Inspections Report.</p> <p>(3) Weekly Safety Report: summary of safety matters of the week.</p> <p>(4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [<i>Progress Reports</i>].</p>
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<p>(6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.</p> <p>(7) Work environment records and other records required by JSSS Chapter 2 [<i>General Safety Measures</i>] and other parts of JSSS.</p> <p>1.33.2. All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.33.3. A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [<i>Safety Reports</i>].</p> <p>1.34 Health and Safety Incentive Schemes</p> <p>1.34.1. The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.</p> <p>NK: May we know if the word of "legitimate" (conforming to the law or to rules) is necessary?(対応済み)</p> <p>We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.</p> <p>Deleted see above.</p> <p>1.34.2. It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.</p> <p>1.34.3. It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.</p> <p>1.34.4. Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.</p> <p>1.34.5. Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.</p> <p>1.34.6. The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.</p> <p>1.34.7. As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.</p> <p>1.34.8. The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [<i>Safety Reports</i>].</p>	<p>medical examination results) shall be stored in compliance with the Laws of the Country.</p> <p>(7) Work environment records and other records required by JSSS Chapter 2 [<i>General Safety Measures</i>] and other parts of JSSS.</p> <p>1.33.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.33.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [<i>Safety Reports</i>].</p> <p>NK6/6: Moved 1.33 to 1.32 and modified.</p> <p>1.34 Health and Safety Incentive Schemes</p> <p>1.34.1 The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.</p> <p>NK: May we know if the word of "legitimate" (conforming to the law or to rules) is necessary?(対応済み)</p> <p>We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.</p> <p>Deleted see above. NK: confirmed.</p> <p>1.34.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.</p> <p>1.34.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.</p> <p>1.34.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.</p> <p>1.34.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.</p> <p>1.34.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.</p> <p>1.34.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.</p> <p>1.34.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [<i>Safety Reports</i>].</p> <p>1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE</p>	<p>1.34 Health and Safety Incentive Schemes</p> <p>1.34.1 The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.</p> <p>1.34.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.</p> <p>1.34.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.</p> <p>1.34.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.</p> <p>1.34.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.</p> <p>1.34.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.</p> <p>1.34.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.</p> <p>1.34.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [<i>Safety Reports</i>].</p>
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<p>1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE</p> <p>1.35.1. Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.</p> <p>All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.</p> <p>1.35.2. The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO or his delegated and technically qualified assistant (JC60) at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.</p> <p>NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system.</p> <p>We want to ask you to modify the 1.35.2 as the above.</p> <p>As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 [Supporting Staff] where this is explained.</p> <p>I do not recommend your suggested change.</p> <p>JC60: Agree with MD</p> <p>NK5/6: Will modify as commented.</p> <p>If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.</p> <p>1.35.3. The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. <u>The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.</u></p> <p>If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.</p>	<p>1.35.1 Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.</p> <p>All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.</p> <p>1.35.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO or his delegated and technically qualified assistant (JC60) at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.</p> <p>NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system.</p> <p>We want to ask you to modify the 1.35.2 as the above.</p> <p>As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 [Supporting Staff] where this is explained.</p> <p>I do not recommend your suggested change.</p> <p>JC60: Agree with MD</p> <p>NK5/6: Will modify as commented.</p> <p>No comment.</p> <p>If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.</p> <p>1.35.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. <u>The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.</u></p> <p>If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.</p> <p>1.35.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:</p>	<p>1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE</p> <p>1.35.1 Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.</p> <p>All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.</p> <p>1.35.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.</p> <p>If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.</p> <p>1.35.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.</p> <p>If, as a result, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.</p>
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1.35.4. As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

- (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works (JC61) of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.

JC61: Temporary Works is covered in (2).

NK5/6: Will modify as commented.

- (2) New or recent Contractor's Equipment and Temporary Works, not more than five (5) years old upon the date that it is mobilised to the Site, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.

Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment before delivering the Site (JC62) by an independent testing, inspection and certification agency to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.

NK: We considers in actual basis as follows:

Q1: Is Scaffoldings classified in (1) TW? If so, no need to discuss the inspection of Scaffoldings before shipment? Shall Scaffoldings be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?

Steel and system scaffolding etc. is considered as Contractor's Equipment but other types may be TW. This is also not covered by Chapter 4 of your draft.

I have defined this is 1.35.1 and as it is an important item for which there should be no future argument.

Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffoldings, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.

Yes, see it includes all of these and yes much will be constructed or assembled at the Site but some major components (e.g. steel sheet piling, anchors, support systems and other components and materials) may be imported in which case this applies. Please refer also to definition in 1.35.1.

Can we delete "and Temporary Works" in (2)?

I do not recommend it.

Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.

This is not my recollection although it was mentioned as examples and my explanation covered all types of Contractor's Equipment.

We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies own old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too.

- (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works (JC61) of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.

JC61: Temporary Works is covered in (2).

NK5/6: Will modify as commented.

- (2) New or up to date recent Contractor's Equipment and Temporary Works, not more than five (5) years old upon the date that it is mobilised to the Site, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and

I suggest that "recent" is changed to "up to date" to be consistent with clause (1), to give it improved meaning (although still not definitive), particularly in view of the omission of the 5 year age limitation (which was definitive).

NK6/6: agreed.

that all of the above will be used correctly and for the purpose intended.

Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment before delivering the Site (JC62) by an independent testing, inspection and certification agency to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.

This inspection was originally for the purpose of checking that the equipment was new or less than 5-years old.

However, as the age criteria has now been deleted, there is no reason why the Engineer should inspect the equipment and no criteria by which he can determine that the equipment is compliant or otherwise. This being the case, I recommend that this useful safeguard clause should now be deleted also.

Without clear age, criteria I do not recommend that any inspection would be time limited, could not include a full mechanical or operational check and ultimately will result in personal opinion. It may also be compromise later attempts to reject equipment at site when it is then found to be unsafe.

Had the age criteria still been maintained, agency inspection would be a very easy and possibly more efficient alternative.

NK: We considers in actual basis as follows:

Q1: Is Scaffoldings classified in (1) TW? If so, no need to discuss the inspection of Scaffoldings before shipment? Shall Scaffoldings be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?

Steel and system scaffolding etc. is considered as Contractor's Equipment but other types may be TW. This is also not covered by Chapter 4 of your draft.

I have defined this is 1.35.1 and as it is an important item for which there should be no future argument.

Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffoldings, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.

1.35.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

- (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.

- (2) New or up to date Contractor's Equipment and Temporary Works, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

and that all of the above will be used correctly and for the purpose intended.

Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before delivering to the Site to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer

If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.

If you don't want pre-inspection at origin that is of course your choice. How to ascertain that it is compliant if there is no pre-inspection? It is too late when it arrives on site. I have given my suggestion and repeatedly explained this.

If JICA do not what this to apply, please let me have your instructions on what shall be changed and how.

We propose to delete the 2nd sentence above.

I do not agree for above reason but respect your wish. Just delete it.

In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."

JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair or maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."

There is no reason why anything should be added here and do not suggest that this is added as it is unnecessary duplication.

Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old.

The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?

JICA are paying market bid rates for the best most productive and safest equipment, why should this be compromised? I have already given my explanations and recommendation, please let me have your instructions on what this shall be changed to or if it shall be deleted.

Many contractors will definitely not like this age imposition because it is regularly abused in the pursuit of profit.

JC62: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant.

NK5/6: Will modify as commented.

Yes, see it includes all of these and yes much will be constructed or assembled at the Site but some major components (e.g. steel sheet piling, anchors, support systems and other components and materials) may be imported in which case this applies. Please refer also to definition in 1.35.1.

Can we delete "and Temporary Works" in (2)?

I do not recommend it.

Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.

This is not my recollection although it was mentioned as examples and my explanation covered all types of Contractor's Equipment.

We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies own old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too.

If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.

If you don't want pre-inspection at origin that is of course your choice. How to ascertain that it is compliant if there is no pre-inspection? It is too late when it arrives on site. I have given my suggestion and repeatedly explained this.

If JICA do not what this to apply, please let me have your instructions on what shall be changed and how.

We propose to delete the 2nd sentence above.

I do not agree for above reason but respect your wish. Just delete it.

In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."

(7) JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair or maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."

There is no reason why anything should be added here and do not suggest that this is added as it is unnecessary duplication.

Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old.

The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?

JICA are paying market bid rates for the best most productive and safest equipment, why should this be compromised? I have already given my explanations and recommendation, please let me have your instructions on what this shall be changed to or if it shall be deleted.

Many contractors will definitely not like this age imposition because it is regularly abused in the pursuit of profit.

JC62: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant.

NK5/6: Will modify as commented.

I note that aside from using the word "recent" which now has no real meaning (see above suggested change) the 5-year age limitation has been deleted here (and in the BDS).

This therefore effectively prevents the engineer from clearly and undisputedly rejecting aged and potentially unsafe or non-compliant equipment including equipment, which

<p>1.36 Health Matters</p> <p><u>1.36.1.</u> The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.</p> <p><u>1.36.2.</u> Healthcare services and facilities at the Site shall be made available free of charge, to or for the use of the Contractor's Personnel, the Employer's Personnel and all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such healthcare services shall also be made available for free of charge for the family members of the aforementioned personnel/persons. (JC63)</p> <p>JC63: Same comment as 1.24 NK5/6: Will modify as commented.</p> <p>1.36.1.1.36.3. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC64)</p> <p>JC64: See 1.2.2 (6). NK5/6: Will modify as commented.</p> <p>1.36.2.1.36.4. Occupational health care shall be provided by the Contractor and shall include for example:</p> <ol style="list-style-type: none"> (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]). (2) Occupational health care including noise, frequent or excessive use of vibrating tools. (3) <u>Avoiding</u> (JC65) Frequent or excessive manual handling of loads, stress and fatigue. <p>JC65: Better to add ??? NK5/6: Will modify as commented.</p> <ol style="list-style-type: none"> (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability. (JC66) <p>JC66: Is this health care service? NK5/6: Will modify as commented.</p>	<p>might be in good condition but is without modern safety features or which is inherently unsafe.</p> <p>NK: We understand MD's opinion, however want to adopt the present stipulation.</p> <p>1.36 Health Matters</p> <p><u>1.36.1</u> The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. 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Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC64)</p> <p>JC64: See 1.2.2 (6). NK5/6: Will modify as commented.</p> <p>1.36.2.1.36.4. 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~~1.36.3-1.36.5.~~ The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:

- (1) Health care staff to be assigned at the Site.
- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational ~~HA~~ healthcare proposal.
- (6) Temporary water and power supply to maintain use during mains supply failure.
- (7) Type of communication facilities and measures for **emergency response**.

NK: May we know example of emergency response?

Please let me know what facilities you require and I will edit.

NK: We will further consider it.

~~1.36.4. Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site.~~

1.36.6. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC67)

JC67: See 1.2.2 (6).

NK5/6: Will modify as commented.

~~1.36.5-1.36.7.~~ Report of Serious Illness

- (1) The Contractor shall inform the Engineer and submit details of any serious illness.

NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.?

It is up to you. Under GCC 6.7 The Contractor is required to maintain records and make reports concerning health matters to the Engineer as the Engineer may reasonably require. This is a further suggestion to try to reduce the volume and contents of report to be prepared.

Please see (4) following, the above can be omitted if required.

~~1.36.3-1.36.5.~~ The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:

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Please let me know what facilities you require and I will edit.

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JC67: See 1.2.2 (6).

NK5/6: Will modify as commented.

Please refer to my earlier comment under 1.24.6 and for the same reasons I do not recommend that this change be made.

NK6/6: PSS 1.36 in Ussr Guide has referred this 1.36.6. We want to specify as above.

~~1.36.5-1.36.7.~~ Report of Serious Illness

- (1) The Contractor shall inform the Engineer and submit details of any serious illness.

NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.?

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- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational healthcare proposal.
- (6) Temporary water and power supply to maintain use during mains supply failure.
- (7) Type of communication facilities and measures for emergency response.

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1.36.6 Report of Serious Illness

- (1) The Contractor shall inform the Engineer and submit details of any serious illness.
- (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures.

<p>(2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.</p> <p>(3) The report shall include details of the HSO's recommended counter-measures.</p> <p>NK: Is "HSO" replaced with Contractor as same as (2) above?</p> <p>No, I do not recommend this. Please refer to the previous notes on this subject, the Contractor may send it but the Health and Safety Officer will prepare it.</p> <p>(4) The Engineer is to be consulted on the types of illness for which reports are to be informed.</p> <p>1.37 Design and Management of Temporary Works</p> <p>1.37.1. Unless otherwise specified in the Particular Safety Specification, the Contractor is required to comply with <u>the management standard with respect to design, erection, use and dismantling of Temporary Works provided in Section 1 and Section 2 of BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework. (JC68)</u></p> <p>Changed already</p> <p>JC68: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.</p> <p>NK5/6: Will modify as commented.</p> <p>1.37.2. An alternative standard is acceptable by reference to JSSS 1.4.7 [<i>Specified Standards and Regulations</i>] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works <u>including Class A Falsework (JC69)</u>.</p> <p>NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specified specially referring to the following BS5975?</p> <p>Section 1: General 1 Scope "This guidance is also applicable to the design of what is termed class A falsework 1) in BS EN 12812:2004, the design of which is for example specifically excluded from BS EN 12812:2004.</p> <p>Please also refer to BS 5975, Foreword, page VII, penultimate paragraph.</p> <p>The European standard on falsework, BS EN 12812, exists in parallel with this British Standard. It specifies performance requirements for the design of falsework in accordance with one of three classes: A, B1 and B2. Limit state design methods are specified for design classes B1 and B2. It does not provide guidance for the structural design of Class A. It is recommended that Section 3 is used to provide guidance for Class A falsework.</p> <p>It appears to follow that BS EN 12812 is not necessarily an acceptable alternative for example because Class A is excluded, I have assume therefore that it is necessary to state the need for Class A Falsework.</p> <p>Please be aware that I have not reviewed or studied the BS in detail so please do not assume that I have. I do recommend that it is studied by JICA and NK to ascertain that it is applicable.</p> <p>Previous clause 1.34.3 regarding alternatives is not now required as I have drafted and included JSSS 1.4.7 [Specified Standards and Regulations] to cover this generally.</p> <p>Previous clause 1.34.6 has already been deleted.</p> <p>There is no need for the suggested insertion into the following clause (previous Clause 1.34.7) as per Ito san's comment.</p> <p>JC69: delete it?</p>	<p>(2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.</p> <p>(3) The report shall include details of the HSO's recommended counter-measures.</p> <p>NK: Is "HSO" replaced with Contractor as same as (2) above?</p> <p>No, I do not recommend this. Please refer to the previous notes on this subject, the Contractor may send it but the Health and Safety Officer will prepare it.</p> <p>(4) The Engineer is to be consulted on the types of illness for which reports are to be informed.</p> <p>1.37 Design and Management of Temporary Works</p> <p>1.37.1 Unless otherwise specified in the Particular Safety Specification, the Contractor is required to comply with <u>the management standard with respect to design, erection, use and dismantling of Temporary Works provided in Section 1 and Section 2 of BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework. (JC68)</u></p> <p>Changed already</p> <p>JC68: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.</p> <p>NK5/6: Will modify as commented.</p> <p>No comment.</p> <p>1.37.2 An alternative standard is acceptable by reference to JSSS 1.4.7 [<i>Specified Standards and Regulations</i>] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works <u>including Class A Falsework (JC69)</u>.</p> <p>NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specified specially referring to the following BS5975?</p> <p>Section 1: General 1 Scope "This guidance is also applicable to the design of what is termed class A falsework 1) in BS EN 12812:2004, the design of which is for example specifically excluded from BS EN 12812:2004.</p> <p>Please also refer to BS 5975, Foreword, page VII, penultimate paragraph.</p> <p>The European standard on falsework, BS EN 12812, exists in parallel with this British Standard. 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NK5/6: Will delete as commented because the sentence is for the management of Temporary Works, so Class A Falsework; one of TWs, is not needed to be specially mentioned.

1.37.3. It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.

1.37.4. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.

1.37.5. The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.

~~1.37.6. Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [Health and Safety Officer at the Site (HSO)].~~

JC: JICA commented as follows:

Issue 6 1.34.8 Too much to require the Contractor name all the specialist staff at the Bid stage. It is also excessive to require consent of the Engineer for those specialist staff.

“Necessary qualification” can be combined with 1.34.12 or 1.34.13.

Issue 6 1.34.9 If comply with JSSS1.9, all the specialist staff shall be appointed before the commencement, and subject to the Engineer’s consent.

NK: From this comment, the 1.37.12 below is enough requirement. 1.37.6 above specifies to refer to 1.12, which 1.12 is for HSO, it seems difficult to apply for personnel of TW.

As 1.3.12 specifies requirement and necessity of consent of the Engineer, we propose to delete 1.37.6.

~~I understand your comment and have no objection to the deletion of 1.37.6.~~

1.37.7. Without affecting the Contractor’s responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor’s Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [Contractor’s Method Statements]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor’s design or methods.

The Engineer ~~may has no obligation under the Contract to~~ review Temporary Works design, ~~however he may choose to do so~~ for those parts which he considers to be of vital importance for safety. The Contractor

NK5/6: Will delete as commented because the sentence is for the management of Temporary Works, so Class A Falsework; one of TWs, is not needed to be specially mentioned.

No comment.

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NK6/6: confirmed.

1.37.7 Without affecting the Contractor’s responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor’s Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

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The Engineer ~~may has no obligation under the Contract to~~ review Temporary Works design, ~~however he may choose to do so~~ for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate

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shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 ~~or any other acceptable standard in accordance with JSSS 1.37.2. The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [Engineer's Duties and Authority] Sub-Subclause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.~~

I have given further thought to the following clause which was originally considered as an exception. I am now of the opinion that offering such alternative to an Employer to state his requirements in the PSSS is not a good idea as it may result have a negative effect.

Most JICA funded projects are large projects and will have a Temporary Works content.

I suggest that the following alternative clause should be deleted to make these important requirements very clear.

If there is only a small and simple TW content, even if the BS 5975 is applied it will not cause any major harm or cost.

The sample specification provided some time back by JICA for the Hong Kong Project showed that all work shall comply with the BS (JC70).

JC70: Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

NK5/6: Will modify as commented.

~~1.37.8. Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:~~

- ~~(1) Appointment of appropriately qualified and experienced staff.~~
- ~~(2) Preparation of adequate Temporary Works designs.~~
- ~~(3) Independent internal or external checking of the Temporary Works Design.~~
- ~~(4) Preparation of a Temporary Works register and records.~~
- ~~(5) Pre erection inspection of all Temporary Works, including materials, components and equipment.~~
- ~~(6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to:
 - ~~(a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO Contractor of a suitable sign showing it as complete and safe to use, and~~
 - ~~(b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO Contractor of a suitable sign showing that it is ready for dismantling.~~~~

NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause,

we consider HSO will be replaced with Contractor as JICA commented:

that the Contractor has systems in place to ensure compliance with BS 5975 ~~or any other acceptable standard in accordance with JSSS 1.37.2. The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [Engineer's Duties and Authority] Sub-Subclause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.~~

I have given further thought to the following clause which was originally considered as an exception. I am now of the opinion that offering such alternative to an Employer to state his requirements in the PSSS is not a good idea as it may result have a negative effect.

Most JICA funded projects are large projects and will have a Temporary Works content.

I suggest that the following alternative clause should be deleted to make these important requirements very clear.

If there is only a small and simple TW content, even if the BS 5975 is applied it will not cause any major harm or cost.

The sample specification provided some time back by JICA for the Hong Kong Project showed that all work shall comply with the BS (JC70).

JC70: Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

NK5/6: Will modify as commented.

Will look at this when I review the user guide.

NK6/6: confirmed.

~~1.37.8 Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:~~

- ~~(1) Appointment of appropriately qualified and experienced staff.~~
- ~~(2) Preparation of adequate Temporary Works designs.~~
- ~~(3) Independent internal or external checking of the Temporary Works Design.~~
- ~~(4) Preparation of a Temporary Works register and records.~~
- ~~(5) Pre erection inspection of all Temporary Works, including materials, components and equipment.~~
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 - ~~(a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO Contractor of a suitable sign showing it as complete and safe to use, and~~
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NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause,

we consider HSO will be replaced with Contractor as JICA commented:

The Engineer may review Temporary Works design, for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 or any other acceptable standard in accordance with JSSS 1.37.2.

<p>Should it be HSO? When BS5975 applies. TWC/TWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?</p> <p>The above applies when BS 5975 doesn't therefore I suggest (subject to JICA and NK agreement) that this can be deleted.</p> <p>However, yes, the Temporary Works staff are all involved to make sure that the Temporary Works are designed and executed correctly, however the HSO is ultimately responsible for ALL safety on the Works and nothing should avoid his overview. I recommend that this should remain as HSO, I believe that it is a correct requirement which in practice should not be more than a counter signature.</p> <p>1.37.9. In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.</p> <p>NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?</p> <p>Understand and agree with your comment. However, JSSS 1.18 gives rules for the proper placement of Contractor's Personnel and it probably better therefore to rephrase this as above.</p> <p>The following clause can be deleted</p> <p>1.37.10. For further information on Method Statements refer to JSSS 1.9 [Contractor's Method Statements].</p> <p>1.37.11. For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].</p> <p>1.37.12. Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties. and shall obtain the consent of the Engineer.</p> <p>NK: We think 1.3.12 is too long sentence to clearly understand requirement.</p> <p>Yes I agree and have reworded this as above.</p> <p>Q-1 Is consent by the Engineer given to specialist staff?</p> <p>This part can be deleted.</p> <p>Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?</p> <p>We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.</p> <p>I have reworded all, please refer to the above</p> <p>1.38 User Training (JC71)</p> <p>JC71: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.</p> <p>NK5/6: Will delete as commented.</p> <p>NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below:</p> <p>(11) MM: This section will be left in the next draft and perhaps deleted in the final draft.</p>	<p>Should it be HSO? When BS5975 applies. TWC/TWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?</p> <p>The above applies when BS 5975 doesn't therefore I suggest (subject to JICA and NK agreement) that this can be deleted.</p> <p>However, yes, the Temporary Works staff are all involved to make sure that the Temporary Works are designed and executed correctly, however the HSO is ultimately responsible for ALL safety on the Works and nothing should avoid his overview. I recommend that this should remain as HSO, I believe that it is a correct requirement which in practice should not be more than a counter signature.</p> <p>1.37.9 In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.</p> <p>NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?</p> <p>Understand and agree with your comment. 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The Contractor shall ascertain for himself that all such staff are qualified to perform their duties. and shall obtain the consent of the Engineer.</p> <p>NK: We think 1.3.12 is too long sentence to clearly understand requirement.</p> <p>Yes I agree and have reworded this as above.</p> <p>Q-1 Is consent by the Engineer given to specialist staff?</p> <p>This part can be deleted.</p> <p>Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?</p> <p>We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.</p> <p>I have reworded all, please refer to the above</p> <p>NK6/6: confirmed.</p> <p>1.38 User Training (Deleted) User Training (JC71)</p> <p>JC71: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.</p> <p>NK5/6: Will delete as commented.</p> <p>I am informed that my comment is not required on "blue" shaded items, therefore none is provided</p> <p>Note for NK: This is safety during construction, it refers to the provision of effective safety training for equipment and systems provided during under ODA construction contracts.</p>	<p>1.37.7 In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.</p> <p>1.37.8 For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].</p> <p>1.37.9 Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties.</p>
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NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

~~recommend that it be included here as a default requirement~~

~~1.38.1. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.~~

~~1.38.2. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.~~

~~1.38.3. User Training shall vary according to the scope of the Works however it shall generally cover the following:~~

- ~~(1) Safe system and Plant use, operation and process control.~~
- ~~(2) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements~~
- ~~(3) Training in use of all hardware and software packages.~~
- ~~(4) Laboratory control (sampling and analysis) including operation of laboratory equipment.~~
- ~~(5) Recording and reporting.~~
- ~~(6) Emergency operation procedure.~~
- ~~(7) Maintenance management procedures.~~
- ~~(8) Inventory and store control systems.~~
- ~~(9) Particular safety procedures, including:
 - ~~(a) Safe working procedure;~~
 - ~~(b) Housekeeping of the facilities;~~
 - ~~(c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and~~
 - ~~(d) Safety measures for the Works and all items of Plant.~~~~

~~1.38.4. Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.~~

~~1.38.5. The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.~~

~~1.38.6. Other requirements for User Training—~~

- ~~(1) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.~~
- ~~(2) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.~~

NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below:

(e) — MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

~~recommend that it be included here as a default requirement~~

~~1.38.7. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.~~

~~1.38.8. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.~~

~~1.38.9. User Training shall vary according to the scope of the Works however it shall generally cover the following:~~

- ~~(10) Safe system and Plant use, operation and process control.~~
- ~~(11) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements~~
- ~~(12) Training in use of all hardware and software packages.~~
- ~~(13) Laboratory control (sampling and analysis) including operation of laboratory equipment.~~
- ~~(14) Recording and reporting.~~
- ~~(15) Emergency operation procedure.~~
- ~~(16) Maintenance management procedures.~~
- ~~(17) Inventory and store control systems.~~
- ~~(18) Particular safety procedures, including:
 - ~~(e) Safe working procedure;~~
 - ~~(f) Housekeeping of the facilities;~~
 - ~~(g) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and~~
 - ~~(h) Safety measures for the Works and all items of Plant.~~~~

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~~1.38.12. Other requirements for User Training—~~

- ~~(20) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.~~

- ~~(3) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.~~
- ~~(4) The Engineer may choose to send representatives to witness the training.~~
- ~~(5) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.~~
- ~~(6) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.~~
- ~~(7) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty six (56) days before any training commences.~~
- ~~(8) Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.~~
- ~~(9) The Contractor shall use visual media as much as possible throughout the training process.~~
- ~~(10) Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.~~
- ~~(11) The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.~~
- ~~(12) Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.~~
- ~~(13) The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.~~
- ~~(14) The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.~~
- ~~(15) Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.~~
- ~~(16) The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe~~

- ~~(21) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.~~
- ~~(22) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.~~
- ~~(23) The Engineer may choose to send representatives to witness the training.~~
- ~~(24) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.~~
- ~~(25) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.~~
- ~~(26) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty six (56) days before any training commences.~~
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use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty six (56) days.

~~(17) Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week days.~~

~~(18) Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.~~

~~(19)(1) The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.~~

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1.39 Unexploded Ordnance (UXO)

NK: we considers JICA may not specify 1.39 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

MD's reply: The Employer should inform the Contractor of the likely existence of UXO and if possible remove. The Contractor shall report any UXO then found to the Employer/Engineer for further instruction. This needs to be included in JSSS and the User Guide so that both parties are aware of the other's obligations. I have edited this to make the Employer responsible and have and separated accordingly.

NK: We have no comments to 1.39. xd v

For your further information, please note that this is an Employer's Risk under GC 17.3 (d).

The problem is, that GC 17.3 places no obligation upon the Employer (who should be more aware than anyone of the possible risk) to advise of the existence, to survey and remove such UXO before bidding or after if then encountered.

This is the reason behind including this in JSSS.

This clause may need some slight modification when I again work on the User Guide.

1.39.1. If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.

1.39.2. Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.

1.39.3. Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.

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1.38.3 Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.

1.38.4 Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop

1.38 Unexploded Ordnance (UXO)

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1.38.3 Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall

<p>1.39.4. Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor’s Personnel, Employer’s Personnel and all other persons and notify the Engineer and relevant authorities.</p> <p>1.39.5. Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy if the further clearance certificate together with any further instructions from the Engineer.</p>	<p>all affected work at the affected area of the Site, clear the area of all Contractor’s Personnel, Employer’s Personnel and all other persons and notify the Engineer and relevant authorities.</p> <p>1.38.5 Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy if the further clearance certificate together with any further instructions from the Engineer.</p>	<p>commence in affected areas of the Site until the receipt of a copy of this certificate.</p> <p>1.38.4 Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor’s Personnel, Employer’s Personnel and all other persons and notify the Engineer and relevant authorities.</p> <p>1.38.5 Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy if the further clearance certificate together with any further instructions from the Engineer.</p>
<p align="center">ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS</p> <p>Annex 1.1: Definitions and Abbreviations</p> <p>A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:</p> <p>(1) “Executing Agency” means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer.</p> <p>(2) “GC” and “PC” followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.</p> <p>(3) “Health and Safety Officer” or “HSO” means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [<i>Health and Safety</i>] as construed in accordance with JSSS 1.12 [<i>Health and Safety Officer at the Site (HSO)</i>].</p> <p>(4) “JICA Standard Safety Specification” or “JSSS” means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works.</p> <p>(5) “Method Statement” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [<i>Contractor’s General Obligations</i>] and supplemented by JSSS 1.9 [<i>Contractor’s Method Statements</i>].</p> <p>(6) “Operation Leader” (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance</p>	<p align="center">ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS</p> <p>Annex 1.1: Definitions and Abbreviations</p> <p>A1.1.1. 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<p>with the Contractor's safety regulations and who can also be referred to within the OSHA definition as a "Competent Person".</p> <p>(7) "OSHA" means the technical requirements of "OSHA Standard Part 1926 Safety and Health Regulations for Construction", as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.</p> <p>(8) "Particular Safety Specification" means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project as illustrated in Annex 1.4 [Figures and Illustrations].</p> <p>(9) "Project Safety Specification" means the document that contains Part 1 [JSSS] and Part 2 [<i>Particular Safety Specification</i>]as illustrated in Annex 1.4 [Figures and Illustrations].</p> <p>(10) "Project" means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.</p> <p>(11) "Safety Plan" means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in GC 4.1 [<i>Contractor's General Obligations</i>] as supplemented by JSSS 1.7 [<i>Contractor's Safety Plans</i>].</p> <p>(12) "Safety" shall also mean "occupational health and safety" and "health and safety".</p> <p>(13) "User Guide" means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.</p> <p>NK: There is no "User Guide" specified in JSSS. Does it necessary to define it in JSSS? I think as it will be published on line probably at the same time as JSSS, it does need definition and more importantly, it requires a clear statement in JSSS, that it is NOT a part of the Contract (see added clause JSSS 0.)</p> <p>It is my understanding that the User Guide is for the reference of the Employer only and it is probably also a good idea therefore to describe it as "An Employer's Guide" or something like that to make it very clear.</p> <p>A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:</p>	<p>with the Contractor's safety regulations and who can also be referred to within the OSHA definition as a "Competent Person".</p> <p>(7) "OSHA" means the technical requirements of "OSHA Standard Part 1926 Safety and Health Regulations for Construction", as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.</p> <p>(8) "Particular Safety Specification" means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project as illustrated in Annex 1.4 [Figures and Illustrations].</p> <p>(9) "Project Safety Specification" means the document that contains Part 1 [JSSS] and Part 2 [<i>Particular Safety Specification</i>]as illustrated in Annex 1.4 [Figures and Illustrations].</p> <p>(10) "Project" means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.</p> <p>(11) "Safety Plan" means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in GC 4.1 [<i>Contractor's General Obligations</i>] as supplemented by JSSS 1.7 [<i>Contractor's Safety Plans</i>].</p> <p>(12) "Safety" shall also mean "occupational health and safety" and "health and safety".</p> <p>(13) "User Guide" means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.</p> <p>NK: There is no "User Guide" specified in JSSS. 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I think as it will be published on line probably at the same time as JSSS, it does need definition and more importantly, it requires a clear statement in JSSS, that it is NOT a part of the Contract (see added clause JSSS 0.)</p> <p>It is my understanding that the User Guide is for the reference of the Employer only and it is probably also a good idea therefore to describe it as "An Employer's Guide" or something like that to make it very clear.</p> <p>Please refer to my earlier notes repeated above from the previous issue of the draft.</p> <p>Following my further review and study, I feel that this is an important issue which if not addressed, may create unnecessary future risk for JICA</p> <p>Please refer to my notes on this subject under Clause 1.3.2 and consider changing the title of the "User Guide" perhaps to "Guide for the Use of Executing Agencies".</p> <p>NK6/6: We proposed JICA to change the title as you proposed "Guide for the Use of Executing Agencies". The stipulation of User Guide is deleted in JSSS, so I think (13) "User Guide" is not necessary as directly related with the Contractor.</p> <p>A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:</p>	<p>with the Contractor's safety regulations and who can also be referred to within the OSHA definition as a "Competent Person".</p> <p>(7) "OSHA" means the technical requirements of "OSHA Standard Part 1926 Safety and Health Regulations for Construction", as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.</p> <p>(8) "Particular Safety Specification" means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project.</p> <p>(9) "Project Safety Specification" means the document that contains Part 1 [JSSS] and Part 2 [<i>Particular Safety Specification</i>].</p> <p>(10) "Project" means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.</p> <p>(11) "Safety Plan" means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in GC 4.1 [<i>Contractor's General Obligations</i>] as supplemented by JSSS 1.7 [<i>Contractor's Safety Plans</i>].</p> <p>(12) "Safety" shall also mean "occupational health and safety" and "health and safety".</p> <p>(13) "User Guide Guide for the Use of Executing Agencies" means the document of that title separately published by JICA for the Executing Agencies and which contain the guides for incorporation of JSSS into the bidding and contract documents for relevant Projects.</p> <p>A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:</p>
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<p>(1) “Accident Response” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [<i>Accident Response Plan</i>].</p> <p>(2) “Confined Spaces” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.</p> <p>(3) “Cofferdam” means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.</p> <p>(4) “Dangerous Goods” means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.</p> <p>(5) “Dangerous Work” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.</p> <p>(6) “Diver” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure. For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [<i>Diving Works</i>].</p> <p>(7) “Earthwork Support” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.</p> <p>(8) “Elevated Access Structures” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.</p> <p>(9) “Emergency Response” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.26 [<i>Emergency Response Plan</i>].</p> <p>(10) “Falling Objects” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.</p> <p>(11) “Falsework” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.</p>	<p>(1) “Accident Response” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [<i>Accident Response Plan</i>].</p> <p>(2) “Confined Spaces” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. 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An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.</p> <p>(5) “Dangerous Work” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.</p> <p>(6) “Diver” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure. 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<p>(12) “Formwork” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.</p> <p>(13) “Hazardous Substances” means any substance, whether solid, liquid or gas, that may cause harm to health.</p> <p>(14) “Hazardous Areas” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as Zone 0, Zone 1 or Zone 2, where:</p> <p>(a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;</p> <p>(b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and</p> <p>(c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.</p> <p>NK: May we know the source of Classification? May we know if this Zones are specified in JSSS? Classification of Zones is from the Technical Measures Document of HSE. https://www.hse.gov.uk/comah/sragtech/techmeasareaclas.htm OSHA also have a classification which is more complicated. Please be aware that in the absence of information in your draft, this is my suggestion but in every case and I rely on JICA and NK to check and confirm this. If you do not want to use this, please advise me and I will delete.</p> <p>(15) “Hoisting Operation” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.</p> <p>For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [<i>Hoisting and Rigging</i>].</p> <p>(16) “Operational Area” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.</p> <p>(17) “Personal Fall Arrest System” or “PFAS” means a fall protection system that is designed to arrest a worker in a fall from a working level.</p>	<p>(12) “Formwork” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.</p> <p>(13) “Hazardous Substances” means any substance, whether solid, liquid or gas, that may cause harm to health.</p> <p>(14) “Hazardous Areas” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. 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Classification of Zones is from the Technical Measures Document of HSE. https://www.hse.gov.uk/comah/sragtech/techmeasareaclas.htm OSHA also have a classification which is more complicated. Please be aware that in the absence of information in your draft, this is my suggestion but in every case and I rely on JICA and NK to check and confirm this. If you do not want to use this, please advise me and I will delete.</p> <p>NK6/6: Chapter 2 specifies as follows: 2.1.5. Further Requirements for Dangerous Work Further to the requirements of JSSS 1.22 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, r ... We want to specify as (14) without specifying Zones 0 to 2.</p> <p>(15) “Hoisting Operation” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.</p> <p>For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [<i>Hoisting and Rigging</i>].</p> <p>(16) “Operational Area” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.</p> <p>(17) “Personal Fall Arrest System” or “PFAS” means a fall protection system that is designed to arrest a worker in a fall from a working level.</p>	<p>(12) “Formwork” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.</p> <p>(13) “Hazardous Substances” means any substance, whether solid, liquid or gas, that may cause harm to health.</p> <p>(14) “Hazardous Areas” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as Zone 0, Zone 1 or Zone 2, where:</p> <p>(a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;</p> <p>(b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and</p> <p>(c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.</p> <p>(15) “Hoisting Operation” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.</p> <p>For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [<i>Hoisting and Rigging</i>].</p> <p>(16) “Operational Area” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.</p> <p>(17) “Personal Fall Arrest System” or “PFAS” means a fall protection system that is designed to arrest a worker in a fall from a working level.</p>
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<p>(18) “Personal Fall Restraint System” or “PFRS” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.</p> <p>(19) “Personal Protective Equipment” or “PPE” means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.</p> <p>(20) “Safety Belt” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.</p> <p>(21) “Safety Harness” means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.</p> <p>(22) “Scaffold” or “Scaffolding” means a temporary structure or structures that provide access on or from which persons work or to support Goods.</p> <p>(23) “Skill Training” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [<i>Skill Training</i>]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.</p> <p>(24) “Spotter” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [<i>Spotters Flagmen and the Like</i>]. Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.</p> <p>(25) “Trade Effluent” means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.</p> <p>(26) “Unexploded Ordnance” or “UXO” shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.</p> <p>(27) “User Training” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel</p>	<p>(18) “Personal Fall Restraint System” or “PFRS” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.</p> <p>(19) “Personal Protective Equipment” or “PPE” means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.</p> <p>(20) “Safety Belt” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.</p> <p>(21) “Safety Harness” means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.</p> <p>(22) “Scaffold” or “Scaffolding” means a temporary structure or structures that provide access on or from which persons work or to support Goods.</p> <p>(23) “Skill Training” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [<i>Skill Training</i>]. 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<p>are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.</p> <p>(28) “Working Platform” means a platform on or within a scaffold that is intended and designed to support persons or Goods.</p> <p>A1.1.3. 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NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?

I think both are useful as the contractor should also be aware of requirements.

It is very important that the Employer/Consultant are prevented from altering the detail of this Annex in their Bidding Documents in any way, as all items are required in the Bid Stage Plan, all are coordinated with JSSS, the same structure, terminology and numbering must be used.

I suggest that this will be reworded something like the following, which I will do when go back to work on the User Guide further:

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor's Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder's intentions, so that this can be understood and properly evaluated. (JC72)

JC72: Please add "outline (or policy?) of risk assessment" as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11) "Safety Plan" means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods.....

NK5/6: To MD, we would like to ask you to add as commented.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

Documents Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF-39.

NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?

I think both are useful as the contractor should also be aware of requirements.

It is very important that the Employer/Consultant are prevented from altering the detail of this Annex in their Bidding Documents in any way, as all items are required in the Bid Stage Plan, all are coordinated with JSSS, the same structure, terminology and numbering must be used.

I suggest that this will be reworded something like the following, which I will do when go back to work on the User Guide further:

A1.2.3. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor's Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

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See (2) below: NK6/6: Confirmed.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

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A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic company policies on risk assessment and health and safety management,

(compliance with Laws of the Country and description of responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

Transferred to below: NK6/6: Confirmed.

A1.2.1 This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor's Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

A1.2.2 The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder's intentions, so that this can be understood and properly evaluated.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic company policies on risk assessment and health and safety management,

<p>(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel</p> <p>A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.</p> <p>(4) Health and Safety Laws</p> <p>A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.</p> <p>(5) Bidder's Safety Management System (JC73)</p> <p>Refer to JSSS 1.5 [<i>Contractor's Safety Management System</i>]</p> <p>Confirm-Describe how which scheme the Bidder <u>institutes the Safety Management System</u> is accredited under.</p> <p>JC73: Modified in accordance with modification to JSSS1.5</p> <p>NK5/6: Will modify as commented.</p> <p>(6) Temporary Works</p> <p>Refer to JSSS 1.37 [<i>Design and Management of Temporary Works</i>].</p> <p>A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying <u>the outline of safety</u> measures to be applied to ensure compliance with the requirements.</p> <p>NK: JICA added "outline" in the last comment.</p> <p>OK I have amended</p> <p>(7) Temporary Facilities on Site</p> <p>The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)</p> <p>NK: We consider that the above sentence is independent clause from (6) above and locate in some place.</p> <p>I have edited as above.</p> <p>(8) Safety Measures for Contractor's Design of the Permanent Works</p> <p>If, under GC 4.1 [<i>Contractor's General Obligations</i>], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.</p>	<p>(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel</p> <p>A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.</p> <p>A description of the responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams.</p> <p>Transferred from above. NK6/6: Confirmed.</p> <p>(4) Health and Safety Laws</p> <p>A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.</p> <p>(5) Bidder's Safety Management System (JC73)</p> <p>Refer to JSSS 1.5 [<i>Contractor's Safety Management System</i>]</p> <p>Confirm-Describe how which scheme the Bidder <u>institutes the Safety Management System</u> is accredited under.</p> <p>JC73: Modified in accordance with modification to JSSS1.5</p> <p>NK5/6: Will modify as commented.</p> <p>No comment.</p> <p>(6) Temporary Works</p> <p>Refer to JSSS 1.37 [<i>Design and Management of Temporary Works</i>].</p> <p>A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying <u>the outline of safety</u> measures to be applied to ensure compliance with the requirements.</p> <p>NK: JICA added "outline" in the last comment.</p> <p>OK I have amended</p> <p>(7) Temporary Facilities on Site</p> <p>The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)</p> <p>NK: We consider that the above sentence is independent clause from (6) above and locate in some place.</p> <p>I have edited as above.</p> <p>(8) Safety Measures for Contractor's Design of the Permanent Works</p> <p>If, under GC 4.1 [<i>Contractor's General Obligations</i>], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.</p> <p>(9) Safety Plan for the Works</p>	<p>(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel</p> <p>A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.</p> <p>A description of the responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams.</p> <p>(4) Health and Safety Laws</p> <p>A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.</p> <p>(5) Bidder's Safety Management System</p> <p>Refer to JSSS 1.5 [<i>Contractor's Safety Management System</i>]</p> <p>Describe how the Bidder institutes the Safety Management System.</p> <p>(6) Temporary Works</p> <p>Refer to JSSS 1.37 [<i>Design and Management of Temporary Works</i>].</p> <p>A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.</p> <p>(7) Temporary Facilities on Site</p> <p>The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)</p> <p>(8) Safety Measures for Contractor's Design of the Permanent Works</p> <p>If, under GC 4.1 [<i>Contractor's General Obligations</i>], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.</p> <p>(9) Safety Plan for the Works</p>
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<p>(9) Safety Plan for the Works NK: May the title be Works? I have edited as above.</p> <p>A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.</p> <p>(10) Safety Plan for Dangerous Work. Refer to JSSS 1.22 [Dangerous Work]</p> <p>A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [Definitions and Abbreviations] and GC 4.1 [Contractor's General Obligations].</p> <p>(11) Permit to Work System Refer to JSSS 1.23 [Permit to Work System]</p> <p>A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.</p> <p>(12) Safety Measures for Contractor's Equipment Refer to JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE]</p> <p>A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.</p> <p>(13) Proposed Health and Safety Incentive Scheme Refer to JSSS 1.34 [Health and Safety Incentive Schemes]</p> <p>A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.</p> <p>(14) Safety Information Sharing and Communications Policy A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.</p> <p>A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.</p> <p>(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE) Refer to JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE]</p> <p>A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when</p>	<p>NK: May the title be Works? 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<p>worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.</p> <p>(16) Site Inspection Plan</p> <p>A description of the methods for Site inspections by the HSO, types of inspection and frequency.</p> <p>The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work</p> <p>(17) Site Security</p> <p>A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.</p> <p>The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.</p> <p>(18) Policy for Preventing Traffic Accidents</p> <p>A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.</p> <p>A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.</p> <p>(19) Reporting Procedure for Unsafe Conditions and Behaviour</p> <p>A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.</p> <p>(20) Accident Response Plan</p> <p>Refer to JSSS 1.23.1 [<i>Accident Response Plan</i>]</p> <p>The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.</p> <p>It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.</p> <p>NK: We consider that the above sentence is independent clause from (19) above and locate in some place.</p> <p>Deletion is OK</p> <p>(21) Health Care Plan</p> <p>Refer to JSSS 1.36 [<i>Health Matters</i>]</p>	<p>worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.</p> <p>(16) Site Inspection Plan</p> <p>A description of the methods for Site inspections by the HSO, types of inspection and frequency.</p> <p>The description shall also include the methods for reporting, recording and utilising results and 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<p>A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.</p> <p>A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.</p> <p>(22) Fire Response Plan Refer to JSSS 2.8 [<i>Fire Prevention</i>] Details of the fire prevention services to be provided at the Site. The Fire Response Plan required by JSSS 2.8 [<i>Fire Prevention</i>].</p> <p>(23) Emergency Response Plan Refer to JSSS 1.26 [<i>Emergency Response Plan</i>] Details of the Emergency Response Plan.</p> <p>(24) Monitoring and Review of Health and Safety Management Activities The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [<i>Contractor's Safety Management Activities</i>]).</p> <p>(25) Safety Induction Training Refer to JSSS 1.20 [<i>Safety Induction Training</i>] An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction. Details of special training required for Dangerous Works shall also be included.</p> <p>(26) Skill Training Refer to JSSS 1.21 [<i>Skill Training</i>] An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.</p> <p>(27) User Training Refer to JSSS 1.38 [<i>User Training</i>] An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.</p> <p>(28)(27) Legal requirements A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.</p>	<p>A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.</p> <p>A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.</p> <p>(22) Fire Response Plan Refer to JSSS 2.8 [<i>Fire Prevention</i>] Details of the fire prevention services to be provided at the Site. 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<p>Annex 1.3: Additional Contractor Forms</p> <p>Attached Forms:</p> <p style="text-align: center;">Form JSSS/BSD - Bidder's Safety Declaration Form JSSS/SAR - Sample Accident Report</p> <p style="text-align: center;">Form JSSS/BSD - Bidder's Safety Declaration</p> <p><i>[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]</i></p> <p>I, <i>[insert name and position of authorised signatory]</i>, being duly authorised by <i>[insert name of Bidder/members of joint venture ("JV")]</i> (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.</p> <p>The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.</p> <p>The Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export (JC74) in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.</p> <p>JC74: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standard?</p> <p>NK5/6: To MD, we would like to ask you to modify as commented.</p> <p>The Bidder declares that he will mobilise for use upon the Works:</p> <ol style="list-style-type: none"> 1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and 2. New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old), all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; <p>NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.</p> <p>Please refer to my recommendations and notes in 1.35 and advise me of your requirements</p>	<p>Annex 1.3: Additional Contractor Forms</p> <p>Attached Forms:</p> <p style="text-align: center;">Form JSSS/BSD - Bidder's Safety Declaration Form JSSS/SAR - Sample Accident Report</p> <p style="text-align: center;">Form JSSS/BSD - Bidder's Safety Declaration</p> <p><i>[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]</i></p> <p>I, <i>[insert name and position of authorised signatory]</i>, being duly authorised by <i>[insert name of Bidder/members of joint venture ("JV")]</i> (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.</p> <p>The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.</p> <p>The Bidder hereby declares that after full investigation and research of domestic resources, he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export (JC74) in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.</p> <p>JC74: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standard?</p> <p>NK5/6: To MD, we would like to ask you to modify as commented. Please see above. NK6/6: Confirmed.</p> <p>The Bidder declares that he will mobilise for use upon the Works:</p> <ol style="list-style-type: none"> 1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and 2. New or recent Contractor's Equipment and Temporary Works, (not more than five (5) years old, not more than five (5) years old), all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; <p>NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.</p> <p>Please refer to my recommendations and notes in 1.35 and advise me of your requirements I note that 5 years has been deleted. Please refer to my further notes under 1.35.</p> <p>NK: confirmed.</p>	<p>Annex 1.3: Additional Contractor Forms</p> <p>Attached Forms:</p> <p style="text-align: center;">Form JSSS/BSD - Bidder's Safety Declaration Form JSSS/SAR - Sample Accident Report</p> <p style="text-align: center;">Form JSSS/BSD - Bidder's Safety Declaration</p> <p><i>[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]</i></p> <p>I, <i>[insert name and position of authorised signatory]</i>, being duly authorised by <i>[insert name of Bidder/members of joint venture ("JV")]</i> (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.</p> <p>The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.</p> <p>The Bidder hereby declares that after full investigation and research of domestic resources, he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.</p> <p>The Bidder declares that he will mobilise for use upon the Works:</p> <ol style="list-style-type: none"> 1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and 2. New or recent Contractor's Equipment and Temporary Works, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;
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and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability.
3. Fully inform workers about hazards;
4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand.
5. Keep accurate records of work-related injuries and illnesses.
6. Perform tests in the workplace, such as air sampling as required by the Project Safety Specification.
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.
9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract.
10. Post injury and illness information and data where workers can see them.
11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed: _____ Signed: _____

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If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed: _____ Signed: _____

<p>(Bidder's Official Representative) (Bidder's Proposed Health and Safety Officer at Site*) Or Bidder's Head Office Health and Safety Manager*)</p> <p>Name: _____ Date: _____</p> <p>(*Delete as applicable)</p>	<p>(Bidder's Official Representative) (Bidder's Proposed Health and Safety Officer at Site*) Or Bidder's Head Office Health and Safety Manager*)</p> <p>Name: _____ Date: _____</p> <p>(*Delete as applicable)</p>	<p>(Bidder's Official Representative) (Bidder's Proposed Health and Safety Officer at Site*) Or Bidder's Head Office Health and Safety Manager*)</p> <p>Name: _____ Date: _____</p> <p>(*Delete as applicable)</p>
<p align="center">Form JSSS/SAR – Sample Accident Report</p> <p><i>[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]</i></p> <p>CONTRACT INFORMATION:</p> <p>1) Name of Project:</p> <p>2) Project Reference Number : (e.g. L/A No., G/A No.)</p> <p>3) Contract Number:</p> <p>4) Package Description:</p> <p>5) Employer: (name and nationality)</p>	<p align="center">Form JSSS/SAR – Sample Accident Report</p> <p><i>[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]</i></p> <p>CONTRACT INFORMATION:</p> <p>1) Name of Project:</p> <p>2) Project Reference Number : (e.g. L/A No., G/A No.)</p> <p>3) Contract Number:</p> <p>4) Package Description:</p> <p>5) Employer: (name and nationality)</p>	<p align="center">Form JSSS/SAR – Sample Accident Report</p> <p><i>[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]</i></p> <p>CONTRACT INFORMATION:</p> <p>1) Name of Project:</p> <p>2) Project Reference Number : (e.g. L/A No., G/A No.)</p> <p>3) Contract Number:</p> <p>4) Package Description:</p> <p>5) Employer: (name and nationality)</p>

<p>6) Contractor: (name and nationality)</p> <p>(If casualty(ies) is(are) belonging to subcontractor,)</p> <p>Subcontractor: (name and nationality)</p> <p>7) Engineer: (name and nationality)</p> <p>8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)</p>	<p>6) Contractor: (name and nationality)</p> <p>(If casualty(ies) is(are) belonging to subcontractor,)</p> <p>Subcontractor: (name and nationality)</p> <p>7) Engineer: (name and nationality)</p> <p>8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)</p>	<p>6) Contractor: (name and nationality)</p> <p>(If casualty(ies) is(are) belonging to subcontractor,)</p> <p>Subcontractor: (name and nationality)</p> <p>7) Engineer: (name and nationality)</p> <p>8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)</p>
<p><i>(above to be inserted before all reports)</i></p>		
<p>FIRST REPORT INFORMATION:</p>		
<p>1) Date and time of accident occurrence (local time):</p>	<p>11) Date and time of accident occurrence (local time):</p>	<p>21) Date and time of accident occurrence (local time):</p>
<p>2) Date and time of first verbal report to Engineer:</p>	<p>12) Date and time of first verbal report to Engineer:</p>	<p>22) Date and time of first verbal report to Engineer:</p>
<p>3) Exact location of accident occurrence:</p>	<p>13) Exact location of accident occurrence:</p>	<p>23) Exact location of accident occurrence:</p>
<p>4) Brief background and apparent cause:</p>	<p>14) Brief background and apparent cause:</p>	<p>24) Brief background and apparent cause:</p>
<p>5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred</p>	<p>15) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred</p>	<p>25) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred</p>
<p>6) Physical damages to the Works, Site and any properties of the third parties</p>	<p>16) Physical damages to the Works, Site and any properties of the third parties</p>	<p>26) Physical damages to the Works, Site and any properties of the third parties</p>
<p>7) Present medical status of casualty(ies):</p>	<p>17) Present medical status of casualty(ies):</p>	<p>27) Present medical status of casualty(ies):</p>
<p>8) Present work status:</p>	<p>18) Present work status:</p>	<p>28) Present work status:</p>

<p>9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):</p> <p>10) Accident Report Submission Date</p>	<p>19) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):</p> <p>20) Accident Report Submission Date</p>	<p>29) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):</p> <p>30) Accident Report Submission Date</p>												
<p>SEQUENT REPORT INFORMATION (POST-INVESTIGATION):</p>														
<p>Cause(s) of the accident:</p> <p>Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:</p> <p>Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:</p> <p>Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:</p> <p>Other Information:</p>	<p>6) Cause(s) of the accident:</p> <p>7) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:</p> <p>8) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:</p> <p>9) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:</p> <p>10) Other Information:</p>	<p>11) Cause(s) of the accident:</p> <p>12) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:</p> <p>13) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:</p> <p>14) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:</p> <p>15) Other Information:</p>												
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 5px;"> Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____ </td> <td style="width:50%; padding: 5px; text-align: center;"> Contractor's Health and Safety Officer (HSO) </td> </tr> <tr> <td style="padding: 5px;"> Receipt acknowledged by: (name): _____ </td> <td style="padding: 5px; text-align: center;"> Engineer </td> </tr> </table>	Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____	Contractor's Health and Safety Officer (HSO)	Receipt acknowledged by: (name): _____	Engineer	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 5px;"> Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____ </td> <td style="width:50%; padding: 5px; text-align: center;"> Contractor's Health and Safety Officer (HSO) </td> </tr> <tr> <td style="padding: 5px;"> Receipt acknowledged by: (name): _____ </td> <td style="padding: 5px; text-align: center;"> Engineer </td> </tr> </table>	Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____	Contractor's Health and Safety Officer (HSO)	Receipt acknowledged by: (name): _____	Engineer	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 5px;"> Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____ </td> <td style="width:50%; padding: 5px; text-align: center;"> Contractor's Health and Safety Officer (HSO) </td> </tr> <tr> <td style="padding: 5px;"> Receipt acknowledged by: (name): _____ </td> <td style="padding: 5px; text-align: center;"> Engineer </td> </tr> </table>	Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____	Contractor's Health and Safety Officer (HSO)	Receipt acknowledged by: (name): _____	Engineer
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(sign): _____ Report Receipt Date(s) _____ _____ Time:		(sign): _____ Report Receipt Date(s) _____ _____ Time:		(sign): _____ Report Receipt Date(s) _____ _____ Time:	
<i>(above to be inserted with detail and signatures at end of each report)</i>		<i>(above to be inserted with detail and signatures at end of each report)</i>		<i>(above to be inserted with detail and signatures at end of each report)</i>	
Annex 1.4: Figures and Illustrations Attached Documents:		Annex 1.4: Figures and Illustrations (JC75) JC75: Delete if nothing else other than Fig A 1.4.1 NK5/6: <i>Will delete as commented.</i> Attached Documents: Fig A1.4.1 — Incorporation of JSSS in Bid and Contract Documents (JC76) JC76: <i>Move to User Guide 1.3.2</i> NK5/6: <i>Will move as commented.</i>			

NK Comment and Revision on Issue 8 (20200608)

NK Comment to JICA Comments(20200506)

JICA Comment and Revision (20200423)

Yellow marking and red letters : Comments by NK (20200319) & (20200327)

Green – subsequent changes made by DCI, Replied to NK inquiry and added DCI notes (20200325)

200514 DCI Comment

DCI Notes:

We have provided comment where necessary or where requested by NK/JICA.

Our comment is not required by JICA on “blue” shaded items, therefore none is generally provided. This does not mean that we have no comment to make or that we recommend the changes are supportable or correct, which they are often not.

In some instances, we have prepared further notes for NK information so that NK are aware of the further reasons for our concerns.

We have also noticed that some original text may have been changed without any clear identification. Please note that we may not have not made comment on these items. We have also not reviewed the text word-for-word to identify all such changes.

Due to the complicated nature of this document, it is difficult for us to properly edit punctuation, numbering and cross references, which is better achieved on a clean copy. We have tried to do this but assume that we will recheck this again later.

Clause numbering has been reformatted throughout and page numbering adjusted.

We have not issued a clean copy as obviously the notes are important for now but when answers can be provided to the further notes and queries herein, we will be pleased to update and prepare a clean coordinated copy.

Due to clause numbering and heading changes, it will be necessary to update all other cross references in other Chapters where they relate to this Chapter 1, we do this when a clean copy of all is available.

NK Comment and Revision on Issue 8 (20200608)

NK Comment to JICA Comments(20200506)

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200514 DCI Comment



JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE ODA



**Japan International Cooperation Agency
(JICA)**

_____, 2020

Prepared: DCI for NK
Issue: 8 (updated draft)
Revision:
Date: 15/05/2020

E20_E4_C2_20200608Chapter 1 General Iss 8 Updated Draft (NK modified for iss 9 and CleanCopy).docx

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200514 DCI Comment

Copy of Mail from Mr. Ito, JICA on 2020/4/23

Dear Sakoda-san,

Very sorry for this late reply with respect to Chapter 1 and User guide.

Regarding Chapter 1, we have sometimes modified directly the text, and sometimes put comments.

After several times of exchange between us, please be informed of the followings:

- 1) As for the modifications of text with a comment highlighted in light blue, you don't have to examine the contents any more. You are requested only to check the quality of language.
- 2) As for the modifications of text without any comment, same. You are requested only to check the quality of language.
- 3) The modifications of text with a comment highlighted in green are sometimes questions and sometimes requests for advice. So, would you please come up with an appropriate solution?

As for the User Guide, our comments are still preliminary since the draft was still preliminary one.

We have, nevertheless, worked in the same manner as mentioned above as long as practicable.

Thank you for your consideration,

I had suggested that copyright and disclaimer clauses would appear to be necessary for JSSS and had further requested that these suggestions be reviewed by JICA legal sources and that confirmation or comment with any revised text be obtained and provided. To date please note that this has not been received, the following remain therefore as good faith suggestions.

ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:

- 1) Japanese Acts, Orders and Ordinances including:
 - Industrial Safety and Health Act
 - Order for Enforcement of Industrial Safety and Health Act
 - Ordinance on Industrial Safety and Health
 - Safety Ordinance for Cranes
 - Ordinance on Safety and Health of Work under High Pressure
 - Ordinance on Prevention of Anoxia, etc.
 - Ordinance on Prevention of Hazards Due to Dust
 - Explosives Control Act
 - Order for Enforcement of Explosives Control Act
 - Ordinance on Explosives Control
- 2) OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- 3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.
- 4) ~~The International Red Cross and Red Crescent Movement (IRCRCM)~~
NK: In 2.9.2 First aid kit: ANSI Z308.1 is referred to. Is the above 4) necessary?
True: ANSI is the kit but first aid courses will also be necessary (see added clauses in Section 2.9 and Chapter 14 also. IRCRCM seems to be a convenient and internationally applicable basis.
The above is not necessary; this page is for copyright rules and as we have not copied or used their script, it can be deleted.
- 5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)

Previous Suggestion for JICA consideration:

COPYRIGHT

Users of this document are free to copy, publish, distribute, transmit and adapt the information herein, on the condition that they acknowledge JICA as the source of the information and include a link to the JICA website.

DISCLAIMER

JICA has prepared and issued this document in good faith for the reference of executing agencies, contractors and project teams engaged under the Japanese ODA programme, to encourage the attainment of a higher standard of health and safety management on its construction projects. JICA, together with the Executing Agencies of its ODA Projects shall not accept or assume any liability or responsibility for any events or the consequences deriving from the use of this document. The document is provided without any express or implied warranty, including without limitation, warranties of accuracy, completeness, fitness for purpose, in general or on particular projects. This document is intended to provide general reference and shall not be relied upon as a specific legal source or reference or used in any way as a basis of any claim by a contractor against any employer or vice versa under any contract for the execution of any works.

JICA STANDARD SAFETY SPECIFICATION (JSSS)

OVERALL DOCUMENT INDEX

Draft
Requires further
coordination

	Section/ Clause:	Description:
1. General Requirements	1.1 to 1.39	General Requirements
	Annex 1.1	Technical Definitions and Abbreviations
	Annex 1.2	Content of Bid Stage Safety Plan
	Annex 1.3	Additional Contractor Forms
	Annex 1.4	Figures and Illustrations
2. General Safety Measures	2.1	Work Environment
	2.2	Risk Control Around the Site
	2.3	Prohibition of Entry – Dangerous Work
	2.4	Spotters, Flagmen and the Like
	2.5	Fall Prevention
	2.6	Falling Objects
	2.7	Adverse Weather Requirements
	2.8	Fire Prevention
	2.9	PPE and First Aid
3. Existing Underground, Concealed and Overhead Services	3.1	Underground and Concealed Services
	3.2	Overhead Services
4. Contractor's Equipment	4.1	General Requirements
		Inspection, Maintenance and Repair
	4.2	Safety Requirements
	4.3	Alternative Use
5. Hoisting and Rigging	4.4	Hired/Leased Contractor's Equipment
	5.1	General Requirements
	5.2	Hoisting Operations
	5.3	Hoisting Equipment – Cranes
6. Temporary Works	5.4	Rigging Equipment
	6.1	General Requirements of Temporary Works
	6.2	Earthwork Support
	6.3	Cofferdams
	6.4	Walkways, Ladders and Stepladders
	6.5	Scaffolding
	6.6	Elevated Access Structures
	6.7	Temporary Electrical Installations
6.8	Electric and Gas Welding and Cutting	
7. Excavation Works	7.1	General
	7.2	Particular Safety Measures
	7.3	Manual Excavation Works
	7.4	Trenches, Pits,
	7.5	Mechanical Excavation Works
8. Foundation Piling Works	7.6	Blasting Works
	8.1	General
	8.2	Particular Safety Measures
9. Concrete Works	9.1	General

	9.2	Particular Safety Measures for Cast-In-Place Concrete Work
	9.3	Reinforcement
	9.4	Formwork (including Falsework)
10. Diving Works	10.1	General
	10.2	Dive Safety Plans
	10.3	Climatic, Marine, Natural and Physical Conditions
	10.3	Personnel for Diving Operations
	10.4	Diving Equipment, Tools, Facilities and Workboats
	10.5	Particular Safety Measures
	10.6	Diving Accident Response Plan
11. Railway Works	11.1	} Excluded - to be included in JSSS Second Edition)
12. Road Works	12.1	
13. Bridge Works	13.1	
14. Tunnelling Works	14.1	
15. Dam Works	15.1	
16. Demolition and Alteration Works	16.1	

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS)
CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

1.1 Safety Declaration

1.1.1 Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.

1.1.2 A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.

NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance1.3 and modify the 1.1.2 as follows:

1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Declaration.

This is specifically a Bid form to be submitted with the Bid and the wording is correct. Actually, this does require a change to the JICA Standard Bidding Document as included in our earlier draft but JICA do not want to do this.

have modified the User Guide to state this but the same problem will arise, the User Guide requires the Executing Agency to change the Bidding Documents but the SBD prevent this.

If JICA do not change the SBD this will continue to be a problem and for now all else must therefore be an unsatisfactory compromise.

NK: NK inquired JICA whether it is not problem to include the form of Safety Declaration in the User Guide because the SBD does not allow addition.

NK5/6YH: JICA did not response to the above inquiry. We will proceed as MD proposed.

1.2 General Reference Notes

1.2.1 For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].

1.2.2 The following further general reference notes apply to the content of JSSS:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
- (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an **equivalent alternative** diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.

(6) *Unless otherwise stated in JSSS or the context is otherwise clear,* (JC1) *Any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor's Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer's Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.* (JC2)

NK: There are many descriptions of "other the Site areas (if any) where the Works are being executed" in JSSS. GC defines as 1.1.6.7 "Site" means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site. (NKのコメントにより、すでに削除済ですが、Q&Aは残しました。)

May we know the following?

Q1: Which places you are assuming as other places?

Q2: Are other places specified in the Particular Safety Specification?

Other places may be specified in the Contract as forming part of the Site such as offsite storage areas provided by the Employer or Employer's and Engineer's compounds and facilities all of which may be remote from the Site but for which the Contractor still has the usual obligations such as care, insurance, maintenance, etc.

This is obviously creating difficulty with interpretation, so I have deleted all such reference in JSSS and it now it constantly refers to the Site only. This will also be considered for mention in the User Guide

IC1: In this chapter 1, the expression "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site" which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better:

1. With this additional wording, simply say "the Contractor's Personnel" or

2. Without this additional wording, every time repeat "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works"

NK5/6YH: NK would like to select the 1 above for JSSS:

IC2: Safety measures are needed not only in the Site.

We would like to have advice of NK/MD. The current draft JSSS says:

A: the Site (very often) and

B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above.

Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:

"Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works."

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat "the Site and other places (if any) where the Contractor intends to execute the Works" every time. But this is too long, so a bit awkward.

How do you think?

NK5/6YH: NK would like to ask MD to review and select proper wording for JSSS:

This clause is intended only to ensure that the Employer's Personnel and any other persons who are entitled to be on the Site are automatically provided with the same health and safety measures that are provided to the Contractor's Personnel, whenever there is a mention of "Contractor's Personnel".

Thereafter there should be no other reference to "Employer's Personnel and any other persons who are entitled to be on the Site" unless it is for reasons other than the provision of health and safety requirements. I have reviewed other clauses and deleted some, where this is necessary.

For the purpose of this reference only it is not necessary to add any additional wording to "Site".

コメントの追加 [伊藤1]: In this chapter 1, the expression "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site" which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better:

1. With this additional wording, simply say "the Contractor's Personnel" or

2. Without this additional wording, every time repeat "all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works"

コメントの追加 [岡本2]: Safety measures are needed not only in the Site.

We would like to have advice of NK/MD. The current draft JSSS says:

A: the Site (very often) and

B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above.

Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:

"Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works".

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat "the Site and other places (if any) where the Contractor intends to execute the Works" every time. But this is too long, so a bit awkward.

How do you think?

I suggest the clause can then be as now suggested by JICA or even left simply as it was.

- (1) Any reference in JSSS to “relevant authority” or “relevant authorities” shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.
- (2) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.

Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

~~1.3.1~~ JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The “Project Safety Specification” shall have priority over the other parts of the Specification in respect of health and safety matters. Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS, as illustrated in Annex 1.4: [Figures and Illustrations], Fig A1.4.1 [Incorporation of JSSS in Bid and Contract Documents] and as follows: (JC3)

~~1.3.2~~ JSSS shall be included as a part of the Specification for the Works, which shall be subdivided into two parts namely:

~~1.3.3~~ The Project Safety Specification (including JSSS); and

~~1.3.4~~ The Technical Specification

~~1.3.5~~ The priorities of the document comprising the Specification are as follows:

~~1.3.6~~ Within the “Project Safety Specification” the Particular Safety Specification shall have priority over JSSS;

~~1.3.7~~~~1.3.1~~ The “Project Safety Specification” shall have priority ~~over the~~ Technical Specification in respect of health and safety matters.

NK: Q1: We think it needs to explain/define “Technical Specification” as same as User Guide 1.3.2 (3) The “Technical Specification” shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safety.

Yes I agree but the problem again is that “Specification” is already defined in the General Conditions of Contract and any change should be therefore be through a Particular Conditions change but JICA do not want this.

I have added the explanation as above but please note that this is a compromise.

Q2: Is “other parts of” necessary?

Thank you and no, if isn't, see above. (Already deleted.)

JC3: *Better to avoid using “Technical specification”*

Fig A1.4.1 moved to User Guide

NK5/6: No comment to JC because JICA want to modify as they commented.

I am informed that my comment is not required on “blue” shaded items, therefore none is provided

Suggested editing

~~1.3.8~~~~1.3.2~~ The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.

I recommend that the following is necessary (JC4)

コメントの追加 [岡本3]:

Better to avoid using “Technical specification”

Fig A1.4.1 moved to User Guide.

~~The User Guide shall not form a part of the Contract.~~

NK: MD proposed the addition above. NK considers it is not necessary.

IC4: Not necessary.

NK5/6: Deleted as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided.

Notes to NK: the statement that the User Guide does not form a part of the Contract is important and intended to limit risk for JICA.

The deletion is shaded in blue so I must not comment.

The biggest user of JSSS is actually the Contractor, and if it is published at the same time as the User Guide on the same JICA website the contractor will refer to it and this could create future problems.

Future claims from contractors can be predicted on this for example that the Bid documents have not been prepared properly according to the User Guide or that the full information (for example required by User Guide clause 1.3.3) has been not been provided or has been withheld. Whether such claims are insupportable under the contract or not, they must still be defended and this takes time and money usually which JICA pay.

JSSS 1.3.4 was intended to very simply prevent this but it has been deleted and I have been asked not to comment, so what can I do?

After further consideration on this subject and as advised in my last comment of Annex 1, I also suggest that it is better to rename the "User Guide", for example as the "Guide for Use of Executing Agencies", it is more correct and may reduce the risk of claim even though it will not solve this problem fully.

1.4 Compliance with JSSS and Other Regulations

1.4.1 JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.

1.4.2 JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

1.4.3 The Contractor shall comply fully with the requirements of JSSS Projectas ~~supplemented and modified by the Particular~~ Safety Specification.

1.4.4 ~~Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer's Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.~~(JC5)

IC5: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided.

1.4.5 ~~Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply.~~(JC6)

NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?

It is intended to be for the situation where JSSS has been agreed to be use, but it is lacking in some areas in which case we use the Laws.

IC6: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6.

NK5/6: Will delete as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided.

コメントの追加 [伊藤4]: Not necessary

コメントの追加 [岡本5]: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.

コメントの追加 [岡本6]: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6

1.4.6 If, for the particular parts of the Works, the Project Safety Specification does not contain safety requirements and there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable safety measures in the Safety Plans internationally acceptable safety regulations for the Engineer's consent. These may contain proposing application of internationally recognised standard or regulation.

NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?

It is intended for use where we have dropped back to the Laws but there are no particular Laws available.

I have no objection if both are deleted.

NK: NK propose to combine 1.4.5 and 1.4.6 below.

If there are no or insufficient safety provisions in the Laws of the Country and in JSSS and the Particular Safety Specification for the particular part of the Works, and if the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent. (subject to MD's review.)

There is no JICA comment to the above.

There is no JICA comment on this.

Your suggested combined clause is suitable, I have edited as follows:

NK6/6: We adopt the following:

1.4.6 If there are no or insufficient safety provisions in the Laws of the Country, in JSSS or in the Particular Safety Specification for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent.

1.4.7 Specified Standards and Regulations(JC7)

JC7: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.

NK5/6: YH think these regulations do not include the law. To MD, please review this comment and sentences.

For example, OSHA requirements to which you have referred in JSSS, are actually their regulations not standards.

These regulations are intended for the US and are enforceable only there under their rule of law.

Using OSHA does not mean or imply that you are adopting related US laws or rules for enforcement.

To avoid any legal association, please refer to subclause (4) below and also throughout the other "technical" chapters of JSSS where reference is made to OSHA by using the phrase to the "technical requirements of"

This is very much a compromise but something like this is necessary to support your choice of OSHA as a reference basis.

My own opinion is that OSHA will not form a part of the applicable Laws or the Laws of the Country with which the Contractor is to comply under the Contract (see GC 1.13 and 13.7 respectively), however I recommend that JICA should check this opinion to support their choice of OSHA, HSE etc.

Please advise of any further requirements or if you require any change.

- (1) Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date.(JC8)

JC8: Better to add this in the main text of JSSS as mentioned in A1.1.5?

NK5/6: YH think these regulations do not include the law. We would like to ask MD to review this.

There appears to be no problem with transferring the above clause to here but it needs deleting in the Annex to avoid duplication.

- (2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is

コメントの追加 [伊藤7]: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.

コメントの追加 [J8]: Better to add this in the main text of JSSS as mentioned in A1.1.5?

acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.

~~(2)~~(3) *Application of detailed parts of any standards or regulations specified in JSSS may be waived at the formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request. (JC9)*

IC9: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of "waiver" should be provided.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

Please refer to editing as shown in red

~~(3)~~(4) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.

1.4.8 Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".

1.4.9 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:

(1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.

(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear. (JC10)

IC10: We don't really understand the meaning of this.

NK5/6: YH considers this cannot be understood. To MD, please review this sentence..

Please clarify the meaning your query as I cannot clearly understand.

Similar to GC 1.5, the documents in JSSS are basically to be taken as mutually explanatory of one another however the priority of the documents should be stated, in order to resolve any future ambiguity or discrepancy. For this reason, I have suggested that for any interpretation difficulty;

between Chapter 1 (which is General) and all other chapters, then Chapter 1 will prevail and apply

between Chapters 2 to 6 (which are also general) and all others (Chapters 7 to 10 and future), Chapters 2 to 6 will apply

Please advise of any change that you require.

NK6/6: We proposed alternative of 1.4.10 in NK6/6 below.

1.4.10 Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion ~~and Defects Notification Period. - during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as~~

~~may be further specified in the Particular Safety Specification.~~ (JC11) Please see NK6/6 below for proposed 1.4.10.

NK: We consider that this phrase may be changed to “and the Defects Notification Period”? (Though the phrase is correctly expressed.)

No, your suggested change would not be correct this has been especially drafted following JICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).

The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer’s property except as stated in this clause.

NK: we agree to leave this as specified.

JC11: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.

With this modification, Particular Safety Specification in User Guide will not be necessary any more.

NK5/6: Will modify as commented.

I am informed that my comment is not required on “blue” items but am a little confused as NK are requested to redraft.

Notes for NK:

The following information is given for NK use.

I completely understood the JICA intentions during the earlier discussion in January which is why the above advice (highlighted in green) was given.

The Contractor must have already completed the Works before commencement of the DNP and they have already been taken over, occupied and put into use by the Employer.

The Contractor of course has a contractual obligation to take care of the health and safety of his employees when they are completing any work which is outstanding or executing any work required to remedy defects during the DNP and it is not necessary to state this in JSSS.

However, the Contractor has no obligation to continue to provide the majority of the facilities or services of JSSS during the DNP as the Works are completed, handed over, occupied and used by the Employer and most if not all temporary facilities will already have been removed.

To state that “the Contractor shall comply with the requirements of JSSS throughout the DNP” is not correct.

The Contractor for example has no obligation to provide ongoing services and facilities during the DNP, meaning no clinic, ambulance, medical facilities, fire-fighting, support to Employer and Engineer, spare PPE, training, scaffolding, contractor’s equipment and temporary works general availability etc etc, all of which are “requirements” of JSSS.

I am concerned that this will be misunderstood or even abused by some employers and consultants and that because this is so stated the contractor will be requested to provide services and facilities that he is no longer responsible for.

If any facilities are particularly required (e.g. clinic, ambulance, medical facilities, fire-fighting, spare PPE, training etc this should be clearly stated in the Particular Safety Specification so that the Contractor is aware and so that it can be included in his bid.

The added text is not therefore advisable.

NK6/6: As explained in User Guide, we revise as follows:

NK6/2: The issues discussed by JICA and MD are different how to specify continued compliance to requirements during the DNP stipulated in JSSS.

JICA want to specify to continue for the Contractor to take safety measures for workers during the DNP.

コメントの追加 [伊藤9]: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.

With this modification, Particular Safety Specification in User Guide will not be necessary any more.

MD wants specify requirements for facilities and services such as medical services for the Employer during the DNP.

We propose to revise 1.4.10 as shown below.

1.4.10 The Contractor shall comply with the requirements of JSSS throughout the Time for Completion and Defects Notification Period.

The Contractor's obligations to provide temporary services and facilities finish at the end of the Time for Completion unless otherwise specified in the Particular Safety Specification.

1.4.11 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.

1.5 Contractor's Safety Management System

1.5.1 The Contractor shall institute a health and safety management system in accordance with OHSAS 18001 or ISO 45001. ~~2018.~~ (JC11a) The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.

JC11a: OHSAS does not exist any more? Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.

NK5/6: OHSAS18001 will be expired on March 11, 2012. To MD, do we make note till the expiry date? NK agreed to delete the year.

1.5.2 The Contractor shall state the applicable standard in the Contractor's Safety Plan. (JC12)

JC12: If delete OHSAS above, delete accordingly.

NK5/6: To MD, please review this.

1.5.3 The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation. Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17. (JC13)

JC13: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.

NK5/6: Will modify as commented.

1.5.4 The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.

NK: JICA deleted 1.5.3 in the last comment because JICA wants for the Contractor to institute and operate HS management system but not request submission of certification. (actually and practically certificate is not much important). We think 1.5.3 should be deleted.

I have deleted the requirement with the Bid (see Annex 1.3), however if the contractor is to comply with a scheme how does the Engineer know which scheme and how to verify compliance?

It has no little or no meaning otherwise.

NK: JICA intention is only to apply the safety management system excluding the certification and auditing by the certification body. Therefore, 1.5.3 is considered not request certification. To JICA, is this understanding correct? この考え方で正しいでしょうか?

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

NK, please can you advise me of the text that you want to insert here and I will edit this as necessary.

1.6 Checking and Validation of Submissions

1.6.1 In accordance with GC 4.9 [Quality Assurance] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval

コメントの追加 [伊藤10]: OHSAS does not exist any more??

Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.

コメントの追加 [伊藤11]: If delete OHSAS above, delete accordingly

コメントの追加 [伊藤12]: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.

or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination (JC13a), design and supervision staff and any independent checkers as appropriate.

コメントの追加 [伊藤13]: coordinator?

NK: Is this correct that we think 1.6.1 is added in relation with design of TW, etc.?

Not only TW it also applies to his Safety Plans, Method statements, any shop or working drawings. In fact any Contractor submissions are stated.

JC13a: coordinator

NK5/6: We think so.

~~1.6.2 For the purposes of interpretation for JSSS, the final paragraph of GC 1.8 [Care and Supply of Documents] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible. (JC14)~~

NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.

This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. I believe that with the increased amount of submissions such as method statements, safety plans and temporary works details, there is an increased possibility that the Engineer could comment but chooses not to or even overlooks or misses, errors. If this happens there is the risk of avoiding responsibility if an error or defect (what is this?) should have been discovered. (JC14)

It is a strange but potentially onerous obligation that is inconsistent with GC 4.9 even if 1.8 does not state the consequences. GC 1.8 states: "If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect."

JC14: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1).

Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor.

We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".

NK5/6: Will modify as commented.

NK, please can you advise me of the text that you want to insert here and I will edit the spelling grammar of this as necessary.

コメントの追加 [伊藤14]: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1).
Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor.
We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".

1.7 Contractor's Safety Plans

1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.

1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:

- (1) that are stated in JSSS;
- (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and

(3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site. (JC15)

JC15: See 1.2.2 (6).

NK5/6: No comment.

This is connected with the provision of health and safety measures as referred to in 1.2.2 (6) and can be deleted to be compatible.

1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:

- (1) Bid Stage Safety Plan (Outline Overall Safety Plan).
- (2) Commencement Stage Safety Plan (Updated Overall Bid Stage Safety Plan)
- (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works

NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.

I don't quite understand your comment, the Bid Stage Plan is followed by an updated plan after Commencement but this is still an early plan and the same plan (or parts of it) will probably require to be further revised and updated as the detail of works develop and before any parts of the works commence.

NK: We understand your meaning.

1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level throughout the Time for Completion of the Works.

1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility and at any time throughout the Time for Completion of the Works.

NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?

Yes thank you, that is true, but better to delete the phrase rather than add.

1.7.6 Bid Stage Safety Plan:

- (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [Content of Bid Stage Safety Plan].
- (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

1.7.7 Commencement Stage Safety Plan

- (1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site,
- (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.
- (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.

NK: Is it not necessary to specify to review Commencement Stage SP?

Can we consider Commencement Stage SP is not be reviewed and the Engineer may review it and give comment in accordance with GC 1.8 Care and Supply of Documents though Japanese draft is specified to review it within 14 days?

Fair comment: I had modified the following clause 1.7.8 to deal with Particular Safety Plans. The Commencement Stage Safety plan is another contract stage submission subject to the same procedures so I have added it there.

Please also note the above correction to the submission date of the plan which should be twenty-eight (28) days after the Commencement Date.

1.7.8 Particular Safety Plans

- (1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.

1.7.9 Procedures for Submission and Review

- (1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works. (JC16)

JC16: Should it be "of the Works or any part thereof"?

NK5/6: We agreed the above modification.

Yes for consistency that is better but I suggest to further consistency please use:

"the Works or any part of the Works."

- (2) The Contractor shall submit:

- (a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].
- (b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.

NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?

I have changed the

Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP.

We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan

I disagree, many of the items mentioned in Issue 6 are to be included in the Method statement and all other items are included in Annex 1.3 all of which will be progressively developed. There is no need to include additional information here.

NK: understand.

- (3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:
 - (c) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;
 - (d) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and

コメントの追加 [岡本15]: Should it be "of the Works or any part thereof" ?

- (e) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.

- 1.7.10 The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.
- 1.7.11 Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.
- 1.7.12 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.

1.8 Risk Assessment

- 1.8.1 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.
- 1.8.2 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.

This is not directly connected with the provision of health and safety measures as referred to in 1.2.2 (6), it is safety warning. I suggest that the full expression should remain.

- 1.8.3 The procedural flow of risk assessment shall be as follows.
 - (1) Identifying hazards.
 - (2) Evaluating risks.
 - (3) Determining measures of risk reduction or elimination.
- 1.8.4 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:
 - (1) Removal of hazards such as eliminating dangerous methods of construction.
 - (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
 - (3) Engineering measures.
 - (4) Management measures including improving skills with additional training.
 - (5) Use of PPE.

NK: May we know what "improved PPE" mean?

Retained

1.9 Contractor's Method Statements

- 1.9.1 The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.
- 1.9.2 Method Statements shall be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and (JC17) include details of all Permanent Works and Temporary Works with supporting documents such as:

コメントの追加 [伊藤16]: Better to have a linkage with the risk assessment.

JC17: Better to have a linkage with the risk assessment.

NK5/6: Will modify as commented.

(1) Studies, investigations and designs.

NK: We suggest to change to “Studies, investigations, and designs”?

Changes

- (2) Structural calculations and any other calculations.
- (3) Specifications and technical details.
- (4) Proposed construction procedure, sequence and method.
- (5) Construction resources including superintendents, workers, operation leaders and Contractor’s Equipment.

NK: We consider “worker” will be used because it is used in other Chapter though FIDIC uses “labour”.

Ok I have changed anyway but it now needs wider wording, labour is also used in FIDIC

- (6) Inspection and monitoring plan.

1.9.3 The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.

1.9.4 Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer’s request.

Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:

- (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.
- (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.
- (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.
- (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.
- (5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.

NK: We consider “for his information” can be deleted because this phrase is not used for Safety Plan though Issue 6 used it.

Changes:

1.10 Engineer's Safety Representative

- 1.10.1 ~~Unless otherwise specified in the Particular Safety Specification, the Engineer may delegate his power and authority to any of his assistant's delegated representative at the Site who (JC18) shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS.~~

IC18: Particular Safety Specification is not necessary with this modification.

NK5/6: Will modify as commented.

- 1.10.2 The terms of the appointment shall be in accordance with GC 3.2 [*Delegation by the Engineer*].
- 1.10.3 Whenever the term "Engineer" is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.

1.11 Safety Compliance Instructions from the Engineer

- 1.11.1 Without affecting or diminishing the Contractor's responsibility under GC 4.1 [*Contractor's General Obligations*] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.
- 1.11.2 If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [*Suspension of Work*] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.

~~1.11.2 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works of any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer's consent and implemented such measures to ensure that no such accident can reoccur. (JC19)~~

IC19: The sentence is not complete???

NK5/6: To Md, please review the sentence.

Thank you, I suggest editing as follows:

- 1.11.4 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works of any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as:
- (1) the cause has been investigated and established by the Contractor;
 - (2) corrective and preventive measures have been formulated by the Contractor and proposed to the Engineer;
 - (3) the Engineer's consent has been obtained for such measures; and
 - (4) the measures have been implemented to ensure that no such accident can reoccur.
- 1.11.5 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.12 Health and Safety Officer at the Site (HSO)

コメントの追加 [伊藤17]: Particular Safety Specification is not necessary with this modification.

1.12.1 For the purposes of interpretation under JSSS, the reference to “accident prevention officer at the Site” in GC 6.7 [Health and Safety], shall be construed as “Health and Safety Officer at the Site”.

NK: HSO is defined in A1.1.1(3), so can 1.12.1 be deleted?

No. This is necessary to correspond to the definition.

Please note that this is a compromise. PC change would have been preferable.

1.12.2 Requirements for the HSO:

- (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.
- (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor's Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety].
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) ~~Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management. (JC20)~~

~~Where there is no legal requirement under the Laws of the Country or unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as that International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK Level 6 Diploma level or Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) in USA or an equivalent alternative internationally recognised qualification covering health and safety and risk management.~~

No problem with the above, I suggest editing as follows:

Where there is no legal requirement under the Laws of the Country and unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as:

- (a) an International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK; or
- (b) Certification as a Certified Safety Professionals (CSP) by the Board of Certified Safety Professionals (BCSP) in USA; or

コメントの追加 [岡本18]: To NK: Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia)

(c) an equivalent alternative internationally recognised qualification covering health and safety and risk management.

KC20: To NK, Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia)

NK5/6: We rechecked the qualification of HSO required in the world and tabulated below:

No	Country	Law/Regulation	Title	Requirements	Work Experience	
1	Japan	Ordinance on Industrial Safety and Health	Safety Officer	1. Trained personnel for 9 hrs training course, or	University or technical college science course other courses	in S&H 2 years 4 years
					Senior high school science course other courses	in S&H 4 years 6 years
					Others	in S&H 7 years
2. Industrial safety consultants.						
2	USA	OSHA APPENDIX C TO §1926.65 COMPLIANCE GUIDELINES 1.Occupational S and H Program. U.S. Army Corps of Engineers, EM-385	e.g. Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) The Safety and Health Manager shall be the CSP.	CSP 1) Bachelor's degree, and 2) BCSP Qualified Credential (e.g. NEBOSH National or International Diploma in Occupational Health and Safety) 3) CSP examination	4 years of safety experience	
3	UK	Internet Information	Environmental Health and safety manager	1) Bachelor's degree in Safety Engineering, etc. 2) National/International Diploma 1. NEBOSH National Diploma in Occupational Health and Safety. 2. British Safety Council Level 6 Diploma in Occupational Safety and Health., etc.	5 years related experience in environmental health and safety.	
4	Singapore	Regulations	1)Representative of the Contractor 2)Safety Supervisor	1) Training and exam. of 3 days 2) Training of 10 hrs per week for 6 months (60 hrs)		
5	India	Regulation	1)Safety Officer 2)Safety Staff	1) Graduation of safety course more than 2 years in college 2) Training course		
6	Thailand	Regulation	1)Head Man Level 2)Technique Level 3)High Technique Level 4)Professional Level 5)Management Level	1) 12 hr training 2) Ditto 3) 180 hr training 4) Graduation of Occupational health bachelor course, or person trained & passed exam., or safety officer of 5 years experience and trained & passed exam. 5) 12 hr training		
7	Indonesia	Regulation	Occupational Health and safety Expert	10 days (90 hrs) training		
8	Vietnam	Regulation	Not found yet.			

NK: We found each country has its regulation regarding qualification of Safety Officer. Japanese one is almost same level as Head Man Level and Technique Level in Thailand.

In Japanese regulation, the Project Manger shall be a General Safety and Health Manager and supervise the Safety officer(s). Japanese contractors may not assign Japanese engineers directly as HSO though they have experience and knowledge of safety management in construction sites and also ability to manage safety in ODA projects. However, they have no academic certificates in Japan and also international training certificates. The Japanese contractors who work for ODA projects may employ safety specialist who having qualification required in the contract or make their engineers be certified by international organizations such as NEBOSH and BCSP. The contractor's engineers can get such certificates by on-line training course.

Japan, USA and UK give special importance to the S&H work experience, Singapore and Indonesia do to training of 60 to 90 hrs course, and Thailand do to any of bachelor, training or experience.

Actually, depending on scale and accident risk of construction project, the employer or contractor seem to determine requirements of HSO for example the following may be applied for large or complicated projects, NEBOSH International National Diploma (Level 6) in UK and CSP (Certified Safety Professionals) by

BCSP in USA, for small projects, International General Certificate (A level) in UK and SMS (Safety Management Specialists) in USA.

NK: From the above, we propose to revise the (7) as above so that the qualification of HSO shall be 1) licensed or registered in the Country (legal requirement under the Laws of the Country), 2) specified in the Particular Safety Specification, and 3) International Diploma issued by NEBOSH in UK or Certified Safety Professionals by BCSP in USA or an equivalent alternative.

(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country, and be whom the Contractor, collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.

NK: We consider NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot find such person. Large contractors and European contractors may find them.

We propose to add (7) "unless otherwise specified in Particular Safety Specification" before "the HSO..."

have split this clause for clarity

suggest that NEBOSH is OK as it is because an equivalent alternative is acceptable (see use of this term in JSSS 1.4.7)

It is also subject to receiving the consent of the Engineer.

NK: We think "two (2) years experience outside the Country" is also too high requirement for the local contractors and also Japanese.

We propose to delete "this two years outside the Country" and specify requirement in Particular Safety Specification depending on the Works.

suggest that it is better to state here as a basic standard. If JSSS cannot specify a general standard, the choice of Executing Agencies will vary greatly. I will draft a relevant clause for the User Guide but please note that I have reduced the experience requirements and deleted the international requirements.

NK, please refer to editing above.

NK6/6: Agreed to your editing and request to check (8) modified because it seems something understandable.

1.12.3 Supporting Personnel

Heading is changed to be consistent with the content

NK-1: JICA commented and minutes recorded in January as follows:

7.1.1 (5) HSO's duties:

JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.

No this is not a correct understanding, the HSO duties and obligations are far wider which is why this clause is correct and necessary.

Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?

Yes, he will be very busy which is why he must be qualified and experience and given the full support staff that he requires and why he must receive the support of other Contractor's Personnel particularly Operation Leaders, all as stated herein.

MM: HSO should always be ultimately responsible as the leader really of the Contractor's safety team with support duties delegated as necessary to a number of personnel including Operation Leaders. This is described in Chapter 1.10.1 and has been discussed. No change is required.

NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:

3. Common requirements in JSSS

- (4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の “The HSO shall inspect work area before starting work...”は、“The Contractor shall ...”へ変更する。

HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.

From this idea, the HSO in the sentence “The HSO shall inspect work area before starting work...” shall be replaced with “the Contractor”.

Please let me review the Excavation comments when I receive them, however this looks correct as he is responsible for inspecting the safety arrangements, even if another person does the inspection on his behalf. It needs no change but the work will not always be directly inspected by him, he can and will delegate but he is singularly responsible and will sign it off.

NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).

We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor’s Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.

Based on the above idea, we want to revise some sentences below.

- (1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.
- (2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor’s Personnel.

NK: We propose to delete (2) from the idea of mentioned above NK-3. The supporting personnel shall be full time assignment. The Contractor shall establish system of daily check by the site staff or designated personnel for check by the Contractor and reporting by the site manager to the HSO.

I think that (2) is clear, correct and necessary. Please refer to the following clauses also. It can be full time assistants or other Contractor’s Personnel also who shall check certain aspects and who shall also have other responsibilities given to them by the HSO.

- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) ~~The HSO shall be expected to develop internal procedures whereby all supporting personnel, (JC21) shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.~~

JC21: It is understood “internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO.....”

But how “and the details of any inspection, for” relates to other part of this sentence???

Non-natives would have difficulty to understand.

NK5/6: YH think the sentence can be separated as follows though no so much difficult to understand the sentence. (次のように分解できるのだと思います。それほど違和感はありませんが。)

- 1) the requirements for any inspection
- 2) the details of any inspection

To MD, we would like to review the sentence because of sentence seems too long.

I suggest the above is edited as follows:

コメントの追加 [伊藤19]: It is understood “internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO.....”

But how “and the details of any inspection, for” relates to other part of this sentence???

Non-natives would have difficulty to understand.

- (6) The HSO shall prepare an internal procedure for the management of his supporting personnel, to ensure that:
- (a) Supporting personnel are made aware of the requirements for any inspection and the details thereof.
 - (b) Supporting personnel immediately advise the HSO of any unsafe conditions with recommendations to prohibit the start or to stop or to change safety practices for the particular work
 - (c) Communications and submissions between HSO and supporting personnel are efficient, timely and clear.
- Following implementation and compliance with the above procedure, the HSO shall sign all inspection records as if the inspection has been carried out by the HSO.
- (7) Where the Works or any part of the Works is to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified supporting personnel for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

1.12.4 Inspections

- (1) The HSO shall be responsible for ensuring:
- (a) That all working areas of the Site (JC22) are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;

JC22: The working areas are not always a part of the Site

NK5/6: No comment to JC because JICA want to modify as they commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

- (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to all affected persons and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and

This is not directly connected with the provision of health and safety measures as referred to in 1.2.2 (6), however I suggest that in this case the wording is changed as above to make it non-specific and therefore of wider w-effect

- (c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE].
- (2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.

1.13 HSO - Scope of Duties and Authority

NK: JICA added "and Authorities" in the last comment.

Now changed as above

- 1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.
- 1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:

コメントの追加 [伊藤20]: The working areas are not always a part of the Site

- (1) Health and Safety Management Work:
- (a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;
 - (d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;
 - (e) Temporarily stopping the Works or **any part** of the Works where the Engineer so instructs in accordance with JSSS 1.11 [*Safety Compliance Instructions from the Engineer*];
 - (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
 - (g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;
 - (h) Appointment of further supporting personnel (refer to 1.12.3 [*Supporting Staff*]);
 - (i) Instructing and training **Operation Leaders** in the health and safety aspects of their work including requirements for inspection and **confirmation** of results to HSO;

NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above:

- (i) Instructing and training the person in charge of construction works and the Contractor's Equipment in the health and safety aspects of their work including requirements for inspection and reporting of results to HSO;

disagrees and do not feel that any change is necessary. The position and authority of the HSO for the health safety on the Works should not be compromised. Who he requires assistance from is really his choice and it is dependent upon many factors such as the contractor's organisation, who is available, the general experience, capability and skill level of workers. We or the Engineer should have no interest in who he delegates support to providing the HSO does his job properly.

- (j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;
- (k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;
- (l) Planning and implementation of various training and education implementation plans;
- (m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;
- (n) Preparing regular internal and external reports on health and safety activities; and
- (o) Hazard prediction activity.

1.14 Procedure for Resuming the Works

- 1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [*HSO - Scope of Duties and Authority*] then, unless otherwise

instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.
- (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within ~~seven fourteen (14)~~ (JC23) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving ~~seven-three (73)~~ (JC24) days' notice in writing of the resumption date.

コメントの追加 [岡本21]: 14 days are too long.

コメントの追加 [伊藤22]: 7 days are too long.

To be proactive, the Engineer may give consent at any stage within the above stated time scales.

JC23& 24: 14 days are too long, and 7 days are too long.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

- (5) The Contractor resumes the Works or part of the Works on the due date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

NK: We think the 1.15 is same as Japanese draft, however, we feel it is not clear who take the following action.

Is there any good idea to express the H&S management shall be made by management personnel consisting of construction managers, Operation Leaders, HSO (for reference I added personnel in charge of the activities below.).

Please see above notes, I do not feel that the following is desirable or necessary.

For further understanding, the Contractor's Representative has similar in fact heavier responsibilities but we (nor FIDIC) consider defining which of his staff do what to support him, I do not recommend but we try to do it.

(1) Overall Safety Management Activities:

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); ~~(by construction managers, Operation Leaders, HSO)~~
- (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and ~~(by construction managers, HSO)~~
- (c) Monitoring the implementation of the Safety Plan. ~~(by HSO)~~

Above is not recommended.

(2) **Daily** Safety Management of Contractor's Personnel:

NK: We would like to add "Daily" before Safety in (2) to distinguish from (1).

No problem added already.

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; ~~(by construction managers, HSO)~~
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures; ~~(by construction managers, Operation Leaders)~~
- (c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: ; ~~(by construction managers, Operation Leaders)~~
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
- (d) Instruction and management of safety education and training; ~~(by construction managers, HSO)~~
- (e) Instruction and management of all safety measures; and ~~(by construction managers, Operation Leaders, HSO)~~
- (f) Site Safety Inspections-~~(by construction managers, Operation Leaders, HSO)~~

None of above is recommended.

NK: We withdraw the addition.

NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.

No problem deleted already.

1.16 Joint Site Safety Inspections

- 1.16.1 In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.
- 1.16.2 Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.16.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.16.4 The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.
- 1.16.5 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.17 Compliance Monitoring and Auditing

- 1.17.1 The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is **ensured**. Such compliance shall be monitored efficiently and transparently at all times, for which purpose the Contractor shall:

NK: We propose to divide the above to two sentences because the above sentence is long and contains two subjects.

This is not quite correct but I have divided anyway.

- (1) Create checklists for monitoring.
- (2) Carry out regular and random inspections.

- (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents.
- (4) Create storage and filing systems for the monitoring records.
- (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer.

1.17.2 Safety inspection are intended to search for risks and hazards, which present a threat to safe working.

1.17.3 The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:

- (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
- (2) Are the Safety Plan requirements being met?
- (3) Is there documented proof of compliance?
- (4) Is health and safety training effective?
- (5) Is the Contractor's health and safety management system working effectively?

1.17.4 The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.

~~1.17.5~~ The audit ~~team~~ procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer.

~~1.17.5.1.17.6~~ ~~Unless otherwise consented to by the Engineer, t~~he audit shall be headed by a senior member of the Contractor's head office health and safety team.

~~1.17.6.1.17.7~~ If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.

~~1.17.7.1.17.8~~ The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.

~~1.17.8.1.17.9~~ The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.

~~1.17.9.1.17.10~~ The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems.

The Audits shall not replace the regular health and safety inspections.

NK: We think the above sentence is better to be divided two sentences.

this is not quite correct but I have divided it into 2

~~1.17.10.1.17.11~~ The audits shall be conducted ~~on a random basis~~ at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.

~~1.17.11.1.17.12~~ The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor. (JC25)

NK: JICA deleted in the last comment. We also consider the Engineer does not do auditing but inspection/supervise the Contractor's activities, and agree to delete this.

do not really understand why it is deleted, as in any case the Engineer should be able to request/initiate an audit if he feels that the H and S system is not working properly

NK: NK misunderstood this clause as the Engineer to do audit. We recommend now as follows;(time limit is given considering the preparation and trip time of the auditing team, and the safety management state cannot be improved in short time except such as cleaning the site, etc. If the Contractor takes actions for the auditing in short time, there is a merit for the Contractor to show example of required improvement.

The Engineer may at his option instruct the Contractor to execute a health and safety audit by giving proper preparation time for the auditing team between 3 days and 7 days.

JC25: It is not practical that the auditing team of the headquarters visit the Site within 3 to 7 days after the Engineer's instruction.

NK: 1.17.11(1.17.12) will be deleted.

~~1.17.12 1.17.13~~ Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.

NK: JICA commented "Such "not to do" should not be included in the specification." and deleted this sentence in the last comment. We agree to delete this because the auditing team cannot come to the site from Headquarters located in other countries by short notice, and the ISO auditing is made by around one month notice or as scheduled.

No comment, to be deleted.

~~1.17.13~~ 1.17.14 An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.

~~1.17.14~~ 1.17.15 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.18 Proper Placement of Contractor's Personnel

1.18.1 To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.

1.18.2 In compliance with GC 6.9 [Contractor's Personnel], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.

change not correct

1.18.3 ~~Labourer~~Worker and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.

1.18.4 The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.

1.18.5 ~~The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement. (JC26)~~

JC26: Duplication with 1.18.2. Also, difficult to have a concrete image on what kind of records???

NK5/6: Will delete as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

1.18.6 The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective

コメントの追加 [岡本23]: Duplication with 1.18.2. Also, difficult to have a concrete image on what kind of records???

trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.

The above will require editing as above in view of your change

1.18.7 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:

- (1) Work content and work environment.
- (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability.
- (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
- (4) Allocation of an achievable and safe work volume and time.
- (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].

1.18.8 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.

1.18.9 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.

1.18.10 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that **the HSO** resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.

NK: We think it is better to replace "he" with "the HSO" though he/she is nowadays used.

It is not necessary, please refer to JSSS 1.2.2 (8) and GC 1.2 (a). I have used "He" and "his" for example consistently and if it changes here it will require further change.

1.19 Safety Training Generally

1.19.1 The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.

1.19.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.

1.19.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.

~~1.19.3~~1.19.4 Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate). (JC27)

JC27: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

コメントの追加 [J24]: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.

1.20 Safety Induction Training

1.20.1 Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom ~~he~~ the HSO is responsible, including the Employer's Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.

Ditto above

No problem

This is training and may not be directly connected with the provision of health and safety measures as referred to in 1.2.2 (6). I suggest for clarity that the full wording should remain.

1.20.2 The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.

~~(5)~~ Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (Refer to separate requirements for special training).

NK: May we know where we can find to refer to special training?

Rephrased

- (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.
- (7) Maintaining all working areas in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.
- (9) Firefighting; actions, precautions and control.
- (10) Health and safety rules.
- (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

1.20.3 Practical on-Site demonstrations shall be included.

1.20.4 Training Personnel (JC28)

JC28: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).

NK5/6: NK agreed to the above.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
- (2) All trainers shall be fluent in the language of the persons to be trained.
- (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.

1.20.5 Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.21 Skill Training

1.21.1 The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. ~~The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.~~ (JC29)

JC29: Not needed to say so in the specification.

NK: Will delete as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

1.21.2 ~~The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available in the Country or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects, the Contractor shall:~~

~~(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or~~

~~(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.~~

~~Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, (JC30) all of whom shall be~~

コメントの追加 [伊藤25]: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).

コメントの追加 [岡本26]:
Not needed to say so in the specification.

コメントの追加 [伊藤27]: May be the case in many project, but skilled staff may be sometimes locally mobilized.

~~appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.~~

JC30: May be the case in many projects, but skilled staff may be sometimes locally mobilized.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

Notes for NK

This is already reflected in FIDIC, 6.1 second paragraph. The suggested change actually changes the FIDIC contract requirements by introducing the wording: "to the extent practicable and reasonable". Such a change is not necessary and not recommended.

I had drafted this clause to strengthen the requirements for importing foreign resources, obviously where they are not available locally. The suggested added wording has no contractual meaning and will definitely weaken if not destroy any attempt by the Engineer (or Employer) to impose stronger requirements for importing foreign skilled persons even though the Employer is already paying for it. I note the other deletions, which also tend to weaken requirements.

This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion and Defect Notification Period.(JC31)

JC31: The Contractor also has to work during DNP and need skilled staff.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

~~Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply: (JC32)~~

JC32: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences?

I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.

NK5/6: To MD, please review the comment and modify the sentences.

Your comment requests that training be provided for other workers in addition to operation leaders.

Your original draft required training only for operation leaders and workers engaged in dangerous work.

Your draft documents contained requirements which were very unclear and which had little or actually no connection with the contract.

Dangerous work is covered by 1.20.2

Please refer to my comments on your original draft which I have explained since; I have advised that the Contractor already has a basic obligation to provide appropriately qualified, skilled and experienced personnel under the contract (see GC 6.1 and 6.9) and these contract requirements must not be compromised.

I had explained that it is illogical and contractually incorrect to require the Contractor to provide skilled personnel (where necessary importing skilled foreign personnel) under the Contract, expect the Employer to pay for this via the Contract Price, yet then assign non-compliant workers and other personnel and expect the Employer to pay for further skill training.

If this is required, the extent to which this is to be applied clearly needs to be carefully defined and controlled otherwise it can be argued that having complied with the training requirements he is not responsible for providing any additional capable and skilled persons unless the employer allows and pays for more skill training.

コメントの追加 [伊藤28]: The Contractor also has to work during DNP and need skilled staff.

コメントの追加 [伊藤29]: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences?

I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.

I am reluctant to add further skill training without knowing your precise additional requirements. Can you therefore please describe who shall receive skill training, to what level, with what resources, how to be managed and paid for and how this is to be made compatible with the Contract and I will edit your text as necessary and include this against earlier advice.

On the basis that skill training is only required to develop the skills of local operation leaders (which is still stretching the contract), I suggest editing this subclause as follows:

NK6/6: Training of OL is accepted as MD proposed below. That for skilled workers are proposed to add and modify 1.21.3. Sentences 2.1.3 to 2.1.5 are copied at NK6/6 below.

1.21.3 Further Training of Operation Leaders

- (1) Unless otherwise specified in the Particular Safety Specification and without limiting or changing the Contractor's obligations under the Contract, the Contractor shall be required to select candidates from his local skilled workforce that he considers are suitable to act as future Operation Leaders.
- (2) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their management abilities, skill levels and awareness of international safety and quality standards.
- (3) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability skills and awareness and also to pass on their knowledge in future to their working colleagues and compatriots.
- (4) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

Consent is better which is why I have used it. There will be a great tendency for the Contractor not to comply with these requirements properly and it needs to be enforceable somehow, otherwise safety (and quality and performance) will suffer

For information" really has no meaning.

Only "for information", Contractor can proceed even if the course syllabus and hours are clearly inadequate and would not otherwise be acceptable.

- (5) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.
- (6) Details-Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.

NK: This request is specified in Annex 1.2 (24)(26) as Outline shall be submitted in Bid Stage SP.

This has been repeatedly discussed and explained.

If safety is to improve, this must happen from Bid stage onwards.

Every part of the Bid SP is Outline but some information is necessary on each subject listed in the Annex and should be submitted at Bid stage. If it is inadequate, only then can it be clarified and negotiated before the Contract is signed. After signing, it is often too late.

NK: We agree to MD's opinion. However, the above sentence needs to be modified to such as "Updated details of such training mentioned in the Bid Stage Safety Plan shall be submitted."

~~Subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.~~

I cannot agree with or recommend the deletion of the clause regarding consent of the Engineer before demobilisation of foreign Operation Leaders, it is written for a purpose. It is sometimes difficult to get a contractor to assign any skilled foreign personnel on JICA projects in remote locations even when they are clearly necessary.

for reasons of safety, quality and performance. Even when mobilised for example to comply with this clause, the contractor will have an incentive to demobilise such personnel as soon as he possibly can to optimise his profits rather than consider safety, etc.. I have recommended that some control is vital i.e. review and consent of the Engineer.

Other clauses that have now been deleted were also necessary to add to the flavour of this sensitive clause.

It now has little meaning or effect and basically a unscrupulous contractor will can now argue that the assignment of some foreign operation leaders and trainers for a short period complies with the requirements, his contract obligations are then all satisfied and having demobilised same persons, the employer is responsible for inadequacies beyond that point by not specifying more training.

~~1.21.3~~

~~1.21.4 When the Contractor is satisfied that candidates have been successfully trained and qualified, and that they are able to act fully in accordance with the requirements of the Contract and subject to receiving the consent of the Engineer, the Contractor may demobilise his Contractor's Personnel from other countries~~

NK: This sentence may be necessary to be reviewed.

Please review the above. Control is essential otherwise the working trainers will be demobilised too soon.

Please also note that this entire clause is my suggestion only. If JICA and/or NK do not want it, please advise and I will delete all such training as necessary.

Please see above; the deletion of the other clause is not recommended. This training clause is an unusual requirement which is not compatible with the contract and it deserves full explanation as there is otherwise a risk that it will be misused in future.

~~that does not, that~~

~~(7) It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice based upon capability in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.~~

~~(8)~~(7) Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

~~see above notes, it really should be "consent"~~

~~1.21.5~~1.21.4 Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

NK/6: We propose to replace the above 1.21.3 to 1.21.4 with follows:

1.21.3 Further Training of Operation Leaders and Skilled Workers

- (1) Unless otherwise specified in the Particular Safety Specification and without limiting or changing the Contractor's obligations under the Contract, the Contractor shall be required to select candidates from his local skilled and unskilled workforce that he considers are suitable to act as future Operation Leaders and skilled workers, respectively.
- (2) Training of Operation Leaders

- (a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their management abilities, skill levels and awareness of international safety and quality standards.
- (b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability skills and awareness and also to pass on their knowledge in future to their working colleagues and compatriots.

(3) Training of **Skilled Workers**

- (a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their **management abilities**, skill levels and awareness of international safety and quality standards.
- (b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability skills and awareness **according to the work** and also to pass on their knowledge in future to their working colleagues and compatriots.

(4) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.

(5) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

(6) Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.

1.21.4 Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.

1.215 Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

1.22 Dangerous Work

1.22.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.22.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.22.3 The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [Permit System] that is to be worn conspicuously and be available for validation by the Engineer.

have added the following because of apparent concerns over the meaning of JSSS 2.5.1.13.

1.22.4 The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist

コメントの追加 [伊藤30]: specially?

(JC33) trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.

JC33: specially

NK5/6: To MD, Please check it.

Can also be "specially" if you prefer

1.22.5 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.

1.22.6 The Contractor shall select, train and equip a specialist rescue team or teams of selected workers at the Site for emergency rescue operation in accordance with JSSS 1.24.6 and 1.24.7, who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue. (JC34).

JC34: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.

NK5/6: Will modify as commented.

1.22.7 Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC35)

NK: Harness is basically used now and belts is not, so deletion of belt is made.

Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 2.

The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works.

JC35: Move to 1.24

NK5/6: Will modify as commented.

1.22.8 The requirement for rescue teams and rescue equipment shall be as specified in the Particular Safety Specification.

1.22.9 1.22.8 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC36).

JC36: ditto

NK5/6: Will modify as commented.

1.22.10 1.22.9 The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.

1.22.11 1.22.10 Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.

1.22.12 1.22.11 For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [Prohibition of Entry – Dangerous Work].

1.22.13 1.22.12 Hazardous Substances.

- (1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists ~~Subcontractor(s)~~ (JC37) that are

コメントの追加 [岡本31]: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.

コメントの追加 [伊藤32]: Move to 1.24

コメントの追加 [伊藤33]: ditto

コメントの追加 [伊藤34]: not necessarily Subcontractors

appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.

JC37: not necessarily Subcontractors

NK5/6: Will modify as commented.

No problem

- (2) [The Contractor shall ~~obtain the Engineer's consent for such specialist Subcontractors and their submit~~ detailed Safety Plans and Method Statements ~~with respect to the removal and disposal of the Hazardous Substances shall also be submitted (JC38)~~ to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].

コメントの追加 [伊藤35]: modified accordingly

JC38: modified accordingly

NK5/6: Will modify as commented.

No problem

1.23 Permit to Work System

1.23.1 The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.

1.23.2 The system shall be designed to control safety for ~~Dangerous Work all types of high-risk work likely to be encountered, including for example: (JC39)~~

コメントの追加 [伊藤36]: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.

JC39: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.

NK5/6: Will modify as commented.

~~1.23.3 Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3 Example of Dangerous Work.~~

~~There is no need to change this or give any examples, please refer to the definition of Dangerous Work in Annex 1.1. If you insist, change to "for example" as in the following subclause.~~

~~(1) Work in elevated positions, for example, transmission towers ladders and scaffolding, roof or ceiling work.~~

~~(2) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.~~

~~(3) Diving Works.~~

NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.

~~I believe that this will vary according to the actual project scope and I recommend to leave as it is. It is better to be left to the discretion of the HSO.~~

1.23.4 The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.

1.23.5 Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.

1.23.6 The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

1.24.1 ~~Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC40)~~

JC40: Moved to 1.24.5.

NK5/6: Will modify as commented.

No comment

NK-1: JICA commented to modify and add "so specified in the Specification" to 1.20.2 in Issue 6.

NK consider that "as specified in Particular Safety Specification" between "the Works," and "the Contractor" if we follow JICA's comment.

NK-2: JICA commented that they want to use "as specified in Particular Safety Specification" more than "unless otherwise specified in Particular Safety Specification" because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSSS)

Can you specify as JICA's request to use "as specified in PSSS"?

- 1) I do not recommend any use or reliance on "as specified in PSSS". If something is then not so mentioned in PSSS, (even when it should be), this means that there is no requirement stated.
- 2) "Unless otherwise specified" followed by stated requirements is the preferred and better method as the stated requirements in JSSS are then a default and even if nothing further is stated in PSSS, there will always be these requirements to rely on. This is a "failsafe" in JSSS production.
- 3) More importantly, it must be understood that the availability of these facilities is a total Contractor responsibility under FIDIC (Clause 6.7), under which the Contractor must provide such facilities, whether specified further by the Employer or not and the PSSS must not compromise this.
- 4) The problem is that work in distant and remote places is a very common feature of JICA projects (such as hydro, water supply, power, irrigation etc.) and frequently proper health and safety facilities are just not made available by the Contractor at the Site at the expense of human life and safety. Often there are no local health authorities, or they are not equipped or not capable or they are too far away to be of any value. Very often contractors do not provide facilities to save money and health and safety suffers badly. This is fairly common practice and a common problem.
- 5) The changes are suggested as a means of improving this situation and they should therefore be viewed against this background.

NK-3: JICA want to clarify who "other persons who are entitled to be on the Site" are, and where "other places (if any) are.

"other persons who are entitled to be on the Site" is from FIDIC (Clause 4.8 and others) and for whom the Contractor has responsibility for care, protection and safety. This is all-embracing and extends beyond Contractor's Personnel and Employer's Personnel to allow anyone who has a legal entitlement to be there (e.g. other contractor's, residents, others who have a right of way through the site, families of site staff (if formally living there and others). I have stated this so that the extent of contractor's compliance with JSSS is clear and so that it does not diverge from the contract. I do not recommend that it is changed.

and any other places as may be specified in the Contract as forming part of the Site" comes from the definition of Site (GC 1.1.6.7) which I have already deleted throughout for clarity and for which will consider and may add an appropriate note in the User Guide.

1.24.2 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.

1.24.3 ~~Unless otherwise specified in the Particular Safety Specification, in (JC41) Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be~~

コメントの追加 [伊藤37]: Moved to 1.24.5.

コメントの追加 [伊藤38]: "Free of charge for everyone" need not to be as default. I don't believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!

If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.

on the Site. ~~(JC42) If so specified in the Particular Safety Specification, such medical services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.~~

コメントの追加 [伊藤39]: See comment to 1.2.2 (6)

NK: JICA want to clarify where "other places (if any) are.

~~Deleted see above~~

JC41: Free of charge for everyone" need not to be as default. I don't believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!

If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.

JC42: See comment to 1.2.2 (6).

NK5/6: Will modify as commented.

NK5/6: YH inquired if the sentence of "the family members of all other persons" is necessary to be deleted.

Yes, this applies only to remote sites as described originally in 1.24.1.

As 1.24.1 is moved then maybe this needs to be moved also or it needs editing, "such medical services" is not then correct

I had originally tried always to use the expression "Unless otherwise specified in the Particular Safety Specification" so what is written in JSSS is a safe default and the risk of error is therefore reduced. This has now been changed here and in 1.36 so reliance is now placed upon the PSS which I had tried to avoid.

1.24.4 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.

1.24.5 ~~Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example include~~The Contractor shall provide the following medical and first aid facilities:

- (1) Deployment of appropriate first aid appliances, aids, instruments and medicines.
- (2) First aid training, appointment of first aiders and dissemination of information.
- (3) Type of communication facilities and measures for emergency response.
- (4) ~~Medical staff to be assigned at the Site.~~
- (4) Medical Facilities on the Site together with description of equipment and consumables.
- (5) Temporary water and power supply to maintain use during mains supply failure.
- (6) Transportation facilities Ambulance services to be provided, ~~including drivers and attendants~~ to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.
- ~~(2)(7) Additional facilities specified in the Particular Safety Specification, if any.~~
- ~~Medical staff to be assigned at the Site.~~
- ~~(3) Emergency medical services where necessary.~~ (JC43)

NK: We feel that the provision of medical services seems excessive unless health insurance can cover it.

~~I disagree if it means saving a life. Whether health insurance covers it or not is irrelevant. There will be situations where it is available and necessary to save life, so can JICA say that fatality is acceptable as the alternative was too expensive?~~

JC43: Where the Site is located in a large distance from a sufficiently equipped hospital.

NK5/6: Will modify as commented.

Your above added clause 1.24.5 is not correct contractually, is not necessary and I do not recommend that it is included, please refer to notes under 1.24.6 below.

- ~~(4)(1) Medical Facilities on the Site together with description of equipment and consumables.~~
 - ~~(5)(1) Temporary water and power supply to maintain use during mains supply failure.~~
 - ~~(6)(1) Type of communication facilities and measures for emergency response.~~
 - ~~(7)(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.~~
- ~~1.24.6 First aid training, appointment of first aiders and dissemination of information.~~

~~1.24.7.1.24.6 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC44)~~

JC44: See comment to 1.2.2 (6)

NK5/6: Will modify as commented.

I do not recommend that your suggested changes are made.

Please refer to GC 6.7 [Health and safety] which in terms of Contractor's basic H and S obligations, should apply and prevail. This is why I had carefully worded this clause and stated "to comply with his obligations under the Contract".

By changing this to "as specified in the Particular Safety Specification" will change the basic requirements of the Contract and should not be done. Ignoring ambiguity and priorities, whatever is stated in the PSS (unless exactly the same as GC 6.7) will unnecessarily and incorrectly change the contract.

Similarly, it is not necessary to define or restrict the services and facilities to be provided as has been attempted in your added 1.24.5 above. I do not recommend that your clause is added meaning that the general requirements of GC 6.7 continue to apply.

The added clause 1.24.5 is not correct anyway as for example "ambulance service" which you have deleted is a requirement of the contract anyway.

To assist the Contractor with his Bid, I had suggested that the Employer/consultant may wish to assist the Contractor by stating actual site requirements in the PSS but not amending the basic requirements of the contract in the process.

On balance I do not see why any real change is necessary to this clause and what is suggested is confusing rather than improving.

~~1.24.8.1.24.7 Where the Works include the following for example, (1) The Contractor shall train selected Contractor's Personnel to perform emergency rescue operations in a safe manner in the event of any accident. Workers so trained (JC45) are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.~~

JC45: Merged with 1.22.6

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

- ~~(1) Work on or near existing electrical equipment, cables, wiring, services and systems.~~
- ~~(2) Dangerous Work such as Confine Spaces, work at height.~~

NK: We consider describing example as above.

コメントの追加 [伊藤40]: See comment to 1.2.2 (6)

コメントの追加 [伊藤41]: Merged with 1.22.6

Please see above notes and Annex 1.1 Definitions. I do not agree that any such examples are necessary

~~(3)(1) Diving Work (JC46)~~

JC46: Diving work is also Dangerous Work

NK5/6: We cannot understand how to this comment (JC46). To MD, please review this comment.

~~(4) Similar special circumstances.~~

1.24.91.24.8 Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC47)

JC47: Move from 1.22.

This should be "may" since the nature of Works may vary

NK5/6: To MD, please review this comment.

I am informed that my comment is not required on "blue" shaded items

It should be "shall", because where the nature of the Works so dictates, it "shall" be provided not "may" otherwise compliance appears optional, which is not the intention.

~~1.24.91.24.9 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.(JC48)~~

JC48: Move from 1.22.

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

~~1.24.91.24.10 All rescue team members Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].~~

~~1.24.91.24.11 Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].~~

NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.

Better to delete reference here "as recommended by OSHA" and include your clear requirements in JSSS 2.9 [PP and First Aid].(JC49)

JC49: Agree.

NK5/6: Will modify as agreed.

No comment

1.25 Measures at the Time Accidents Occur

1.25.1 When an accident occurs, ~~the HSO the Contractor~~ the HSO shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:

NK: JICA added in the last comment.

NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6. (JC50)

I disagree completely and do not recommend this (or any such) change. As I have explained repeatedly, the HSO must have this authority in order to fulfil his safety control functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible

JC50: Agree.

NK5/6: Will modify as agreed.

コメントの追加 [伊藤42]: Diving work is also Dangerous Work

コメントの追加 [伊藤43]: Move from 1.22

This should be "may" since the nature of Works may vary?

コメントの追加 [伊藤44]: Move from 1.22

コメントの追加 [伊藤45]: Agree

コメントの追加 [伊藤46]: Agree

For the purposes of safety, the HSO must immediately take this action when he is aware of it and this should remain as his duty, not the contractor as you suggest. The interests are different and if immediate action by HSO is not taken, it should be the HSO that is held responsible.

NK6/6: This is the duty of the HSO, so replaced from the Contractor to the HSO to make who take actions in the Contractor at accident clear as specified in 1.13 HSO - Scope of Duties and Authority, 1.13.2 (1) (d) Temporarily stopping the Works or any part of the Works following any accident... and (g) Preparing proposals, reporting and consulting with the Engineer, ...

- (1) Safely locate and extract casualties.
- (2) Provide first aid treatment at the Site.
- (3) Implement Secondary accident prevention activities, including:
 - (a) Preserving the accident site, make safe and prevent anyone interfering or entering;
 - (b) Discontinuing construction work related to or in the vicinity of the accident; and
 - (c) Implementing any further measures instructed by the Engineer.

1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.

- (1) The Contractor shall inform the Engineer and submit details of any accident.
- (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
- (3) The Accident Report shall include details of ~~the HSO's~~ ~~the Contractor's~~ ~~the HSO's~~ recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [*Additional Contractor Forms*].

Please see above notes on this subject. This should remain as the HSO. I disagree and do not recommend this (or any such) change.

NK6/6: Understood your opinion. It needs to explain why NK changed opinion to JICA.

1.25.3 For resumption of work procedures, refer to JSSS 1.14 [*Procedure for Resuming the Works*].

1.26 Emergency Response Plan

1.26.1 ~~To the extent reasonably possible~~, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and ~~as far as reasonably possible~~ shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.

The Contractor shall ~~the~~ take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, ~~where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have and to reasonably avoided, or~~ overcome or lessened the effects to a reasonable extent. (JC51)

NK-1: Can we delete one of two "reasonably possible" above?

Yes, delete as above.

NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).

With the changes in your draft that have now been agreed, I have already modified JSS 2.7 and I thought that the above can now be deleted as shown, however your later comments against 1.26.5 are confusing me greatly and I am unsure. Can you please answer my request against 1.26.5 first and I can then modify the above if necessary.

JCS1: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.

コメントの追加 [伊藤47]: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.

NK5/6: Will modify as commented.

I give no further comment

1.26.2 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

It is perfectly correct as it is however have split it. (JC52)

JC52: Thank you for being non-native friendly.

FIDIC 1999 and MDB version have been supported worldwide because of its "understandability". Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

NK5/6: No comment.

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.26.3 Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage and flooding arising from such flooding, earthquake or volcanic activity.

NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.

Yes this can be changed as above.

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and (JC53) to any third parties and neighbours and property not connected with the Works but potentially affected thereby.

JC53: See 1.2.2 (6).

NK5/6: Will modify as commented.

No comment

- (2) Provision of temporary support to all sides and soffits of excavations or portal of portal of (JC54) tunnelling of sufficient strength, durability and suitability.

NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel.

My recommendation is still (as written) to leave it as it was and make this as wide a term as possible to increase the coverage. There is no acceptable definition of "portal" and this change just introduces argument on interpretation, why change?

NK: We accept to leave as it is.

JC54: Better to add.

コメントの追加 [伊藤48]: Thank you for being non-native friendly. FIDIC 1999 and MDB version have been supported worldwide because of its "understandability". Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

コメントの追加 [伊藤49]: See 1.2.2 (6)

コメントの追加 [伊藤50]: Better to add

NK5/6: Will modify as commented.

No comment

- (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.

1.26.4 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [Contractor's General Obligations] and JSSS 1.9 [Contractor's Method Statements].

1.26.5 ~~Unless otherwise specified in the Particular Safety Specification,~~ the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.

~~This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract.(JC55)~~

NK: We consider that the Contractor may have difficulty to assume what activities can be made.

We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.

Which underlining? In 1.26.1?

Please see 1.26.6 for my assumption of your requirements.

Your draft has never been clear to me and I am still having difficulty to understand what your draft means and what are your intentions and requirements.

Please note:

1) The Contractor can only plan for what he can reasonably foresee or anticipate and

2) It is necessary to state this so that no confusion is introduced with FIDIC GC 19

3) This only leaves simple search and contact activities which has little or no meaning.

JSSS cannot specify what other measures the Contractor is to take after a Force majeure event (which I guess your emergency plan is trying to cover) as these events and any counter measures cannot be predicted.

Please can you clarify exactly what you are requiring the Contractor to do in the event of an earthquake, hurricane, typhoon or volcanic activity, so I can finalise this clause and also JSSS 2.7.

JC55: Better to jump to 1.26.6 without this.

NK5/6: Will modify as commented.

No further comment

NK: Deleted as we cannot assume other requirements by the Employer.

1.26.6 The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels.

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

コメントの追加 [岡本51]: Better to jump to 1.26.6 without this.

1.26.7 The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:

- (1) Employer's Personnel at the Site and also at their respective head office where different.
- (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
- (3) Contractor's Personnel at the Site and also at the head office where different.
- (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.

1.26.8 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.

~~Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site. (JC56)~~

コメントの追加 [伊藤52]: See 1.2.2(6)

JC56: See 1.2.2(6).

NK5/6: To Md, please review this comment.

~~This is connected with the provision of health and safety measures as referred to in 1.2.2 (6) and can be deleted to be compatible.~~

Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.26.9 If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.26.10 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.

1.26.11 For further measures and requirements refer to JSSS 2.7 [*Adverse Weather Requirements*].

1.27 Contractor's Safety Committee and Regular Safety Meetings

1.27.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.27.2 Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.

- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) Representative of labour union, if any Contractor's Personnel.
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.27.3 The HSO shall be the chairman of the Safety Committee.

1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (c) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence;
 - (d) Monthly or weekly schedule of important health and safety matters;

NK: Are the phrases in red to be added?

Is this sort of comment really necessary? Yes it can be changed but this is only an abbreviated sample agenda

- (e) Feedback on the regular safety, coordination and other meetings with the Engineer;
- (f) Safety instructions received from the Engineer;
- (g) Items to be coordinated with police, fire department and other related organisations;
- (h) Compliance and registration requirements under the Laws of the Country;
- (i) Safety and health awards, media attention and the like;
- (j) Hazards, safety and health problems identified by any members of the Safety Committee;
- (k) Effectiveness of existing Safety Plans and suggestions for revision and improvement; and
- (l) Other matters.

NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion.

Again, is this sort of comment really necessary? I have changed this

NK: modified as requested by JICA.

1.27.5 Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.28 Engineer's Regular Safety Meetings

1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **in the previous month** and measures **to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

With above:

Is the sequence here acceptable or shall it change as above?

NK6/6: Yes.

- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Status of resolution of previous problems;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country; and
- (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.
- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.
- (5) The Engineer shall issue a formal instruction for any variation requests.

1.29 Project Safety Committee

1.29.1 On larger Projects with multiple contract packages and contractors and unless otherwise stated in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.29.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.29.3 The Chairman of the Safety Committee **shall** be the Employer.

1.29.4 The Employer **shall** hold regular Project Safety Committee meetings, **on a monthly basis** unless otherwise agreed.

NK: JICA commented to delete this as holding meetings are not monthly basis but optional.

We propose "periodically as requested by the Employer" and ask you to reply to this comment as reply is not mentioned in the document with notes.

Please clarify what you want to be deleted.

NK: Deletion is "on monthly basis".

1.29.5 The Employer **shall** prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

NK: JICA commented to replace "shall" with "may" in Clauses 1.29.3 to 1.29.5.

We want to ask you to reply to this comment as reply is not mentioned in the document with notes.

Please note that I have already edited the first paragraph to state "unless otherwise specified."

With this change I think that no other change is necessary.

NK: MD 氏の回答をご参照願います。

1.30 Health and Safety Coordination with Other Contractors

NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer.

We propose to move them to the User Guide.

I disagree, this affects the Contractor also and it is important that it is stated here so that there is common and very clear legal agreement between Employer and Contractor on who does what.

I think that this requires mention in both JSSS and the User Guide to avoid future dispute.

Please also note my understanding that the User Guide is not a part of the Contract and please let me know if you require differently.

NK: MD 氏の回答をご参照願います。

1.30.1 Refer to GC 2.3 [*Employer's Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer,
- (3) the personnel of any relevant authorities ~~legally constituted public authorities~~, who may be employed in the execution on or near the Site of any work not included in the Contract.

I have now given definition to "relevant authorities" and therefore suggest the above correction

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] and GC 4.18 [*Protection of the Environment*].

The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.

When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.

- 1.30.2 The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.
- 1.30.3 If any other contractors are employed by the Employer or if any **relevant authorities legally constituted public authorities** responsible to the Employer ~~are is~~ working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:
- (1) Frequency of the meetings: as and when considered necessary by Engineer.
 - (2) Unless otherwise agreed, attendees shall include representatives of:
 - (a) The Employer;
 - (b) The Contractor;
 - (c) Other contractors employed by the Employer; and
 - (d) Personnel of any **relevant authorities legally constituted public authorities**.

NK: We considers it is easy to understand attendee by adding "who may be employed in the execution on or near the Site of any work not included in the Contract." to (d) though it mentioned in the first sentence.

Don't understand your comment, please advise what change you require. (本 Q&A は無視願います。)

I have now given definition to "relevant authorities" and therefore suggest the above correction

- (3) Agenda should relate to coordination among different contractors including for example:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any **relevant authorities any legally constituted public authorities**;

I have now given definition to "relevant authorities" and therefore suggest the above correction

- (c) Accidents, injuries **in the previous period** and measures **to be taken** to prevent any reoccurrence;

NK: Are the phrases in red to be added?

See previous note

- (d) Status of resolution of previous problems;
- (e) Items to be coordinated with police, fire department and other related organisations;
- (f) Compliance and registration requirements under the Laws of the Country;
- (g) Safety and health awards, media attention and the like; and
- (h) Other matters.

1.30.4 Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the **Engineer's** monthly progress report. (JC57)

JC57: **Engineer's monthly progress report is normally not shared with the Contractor. Delete "Engineer's" to mean Contractor's progress report.**

NK5/6: Will modify as commented..

コメントの追加 [岡本53]: Engineer's monthly progress report is normally not shared with the Contractor. Delete "Engineer's" to mean Contractor's progress report.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

1.31 Safety Statistics

1.31.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.31.2 Actual statistics shall include the following:

NK6/6: we modified (1) to (17) as shown in NK6/6 below.

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, ~~casualties~~, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Remedial measures taken.
- (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.
- (7) Record of reports as may be required by government authorities.
- (8) Number of health and safety staff.
- (9) Number of Contractor's safety meetings and frequency.
- (10) Number of candidates given safety induction and other training.

NK: Are "candidates" replaced with "Contractor's Personnel"?

No, they are all candidates for training and can include others e.g. Employer's Personnel and others, etc.

- (11) Number of safety inspections,
- (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (13) Instructions issued for unsafe behaviour or unsafe site conditions.
- (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (15) Engineer's Instructions issued for work suspension.
- (16) HSO instructions issued for work stoppage. (JC58)
- (17) Others.

JC58: **Statistics and Records are mixed.**

1 to 3 and 5 relate to statistics.

4 and 6 to 16 relate to records.

コメントの追加 [伊藤54]: **Statistics and Records are mixed.**

**1 to 3 and 5 relate to statistics,
4 and 6 to 16 relate to records.**

It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32".

By doing this, things will be streamlined : "statistics → records → their reporting"

It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32"

By doing this, things will be streamlined : "statistics → records → their reporting"

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

NK6/6: We modified based on the above comment JC58. Changed order 1.32 and 1.33. We selected statics items which shall be submitted in daily safety report.

- (1) Accident: description, casualties, location, time, type and cause.
- (2) Near-miss: description, location, time, type and cause.
- (3) Lost-time: lost hours of casualties, duration of discontinuation.
- (4) Total working hours for calculation of frequency rate, severity rate and annual incident rate.
- (5) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.
- (6) Number of health and safety staff.
- (7) Number of candidates given safety induction and other training.
- (8) Number of safety inspections.
- (9) Number of detections of non-compliant, unsafe or lack of Contractor's Equipment.
- (10) Number of instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (11) Number of Engineer's Instructions issued for work suspension.
- (12) Number of HSO instructions issued for work stoppage.
- (13) Others.

1.31.3 All data shall be in a format and content given consent by the Engineer.

1.31.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.

1.31.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].

NK6/6: We modified based on the above comment JC58. Changed order 1.32 and 1.33. We selected statics items which shall be submitted in daily safety report. The revised 1.32 and 1.33 is below.

1.32 Health and Safety Records

1.32.1 The Contractor shall keep health and safety records for the following:

- (1) Inspection records and checklists.
- (2) Meetings for safety and health management.
- (3) Monitoring of safety and health management activities.
- (4) Health and safety education and training for the Contractor's Personnel.
- (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
- (6) Work environment records and other records required by JSSS Chapter 2 [General Safety Measures] and other parts of JSSS.
- (7) Record of reports as may be required by government authorities.
- (8) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
- (9) Instructions issued for unsafe behaviour or unsafe site conditions.
- (10) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
- (11) Engineer's Instructions issued for work suspension.
- (12) HSO instructions issued for work stoppage.
- (13) Others

1.32.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.

1.32.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].

1.32 1.33 Safety Reports

1.32.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:

- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.

NK Is it necessary to add "for"?

Yes, it can be

- (2) Contractor/HSO and Joint Site Safety Inspections.(JC59)

JC59:Joint Site Safety Inspection Report ?

NK5/6: Will modify as commented.

- (3) Weekly Safety Report: summary of safety matters of the week.
- (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [Progress Reports].

1.33 Health and Safety Records

1.33.1 The Contractor shall keep health and safety records for the following:

- (1) Accidents, fatalities, near misses.
- (2) Inspection records and checklists.
- (3) Meetings for safety and health management.
- (4) Monitoring of safety and health management activities.
- (5) Health and safety education and training for the Contractor's Personnel.
- (6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
- (7) Work environment records and other records required by JSSS Chapter 2 [General Safety Measures] and other parts of JSSS.

1.33.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.

1.33.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].

1.34 Health and Safety Incentive Schemes

1.34.1 The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.

NK: May we know if the word of "legitimate" (conforming to the law or to rules) is necessary?(対応済み)

We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.

Deleted see above

コメントの追加 [伊藤55]:Joint Site Safety Inspection Report ?

- 1.34.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.
- 1.34.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.
- 1.34.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.
- 1.34.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.
- 1.34.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.
- 1.34.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.
- 1.34.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [*Safety Reports*].

1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE

- 1.35.1 Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

- 1.35.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by **the HSO** ~~(or his delegated and technically qualified assistant)~~ (JC60) at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed **by the HSO**, thereby certifying the items as being **safe for use**.

コメントの追加 [伊藤56]: Agree with MD

NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system.

We want to ask you to modify the 1.35.2 as the above.

As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 [Supporting Staff] where this is explained.

I do not recommend your suggested change.

JC60: Agree with MD

NK5/6: Will modify as commented.

No comment

If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for

which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

1.35.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.

If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.35.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

- (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works (JC61) of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.

JC61: Temporary Works is covered in (2)

NK5/6: Will modify as commented.

- (2) New or up to date recent Contractor's Equipment and Temporary Works, not more than five (5) years old upon the date that it is mobilised to the Site, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and

I suggest that "recent" is changed to "up to date" to be consistent with clause (1), to give it improved meaning (although still not definitive), particularly in view of the omission of the 5 year age limitation (which was definitive).

that all of the above will be used correctly and for the purpose intended.

~~Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment before delivering the Site (JC62) by an independent testing, inspection and certification agency to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.~~

This inspection was originally for the purpose of checking that the equipment was new or less than 5-years old.

However, as the age criteria has now been deleted, there is no reason why the Engineer should inspect the equipment and no criteria by which he can determine that the equipment is compliant or otherwise. This being the case, I recommend that this useful safeguard clause should now be deleted also.

Without clear age, criteria I do not recommend that any inspection would be time limited, could not include a full mechanical or operational check and ultimately will result in personal opinion. It may also be compromise later attempts to reject equipment at site when it is then found to be unsafe.

Had the age criteria still been maintained, agency inspection would be a very easy and possibly more efficient alternative.

NK: We considers in actual basis as follows:

コメントの追加 [岡本57]: Temporary Works is covered in (2)

コメントの追加 [伊藤58]: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant?

Q1: Is Scaffolding classified in (1) TW? If so, no need to discuss the inspection of Scaffolding before shipment? Shall Scaffolding be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?

Steel and system scaffolding etc. is considered as Contractor's Equipment but other types may be TW. This is also not covered by Chapter 4 of your draft.

I have defined this in 1.35.1 and as it is an important item for which there should be no future argument.

Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffolding, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.

Yes, see it includes all of these and yes much will be constructed or assembled at the Site but some major components (e.g. steel sheet piling, anchors, support systems and other components and materials) may be imported in which case this applies. Please refer also to definition in 1.35.1.

Can we delete "and Temporary Works" in (2)?

I do not recommend it.

Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.

This is not my recollection although it was mentioned as examples and my explanation covered all types of Contractor's Equipment.

We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies own old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too.

If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.

If you don't want pre-inspection at origin that is of course your choice. How to ascertain that it is compliant if there is no pre-inspection? It is too late when it arrives on site. I have given my suggestion and repeatedly explained this.

If JICA do not want this to apply, please let me have your instructions on what shall be changed and how.

We propose to delete the 2nd sentence above.

I do not agree for above reason but respect your wish. Just delete it.

In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."

JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair or maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."

There is no reason why anything should be added here and do not suggest that this is added as it is unnecessary duplication.

Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old.

The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?

JICA are paying market bid rates for the best most productive and safest equipment, why should this be compromised? I have already given my explanations and recommendation, please let me have your instructions on what this shall be changed to or if it shall be deleted.

Many contractors will definitely not like this age imposition because it is regularly abused in the pursuit of profit. JC62: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant.

NK5/6: Will modify as commented.

I note that aside from using the word "recent" which now has no real meaning (see above suggested change) the 5-year age limitation has been deleted here (and in the BDS).

This therefore effectively prevents the engineer from clearly and undisputedly rejecting aged and potentially unsafe or non-compliant equipment including equipment, which might be in good condition but is without modern safety features or which is inherently unsafe.

1.36 Health Matters

1.36.1 The Contractor is reminded of his obligations under GC 6.7 [*Health and Safety*] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.36.2 *Healthcare services and facilities at the Site shall be made available free of charge, to or for the use of the Contractor's Personnel, the Employer's Personnel and all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such healthcare services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.* (JC63)

JC63: Same comment as 1.24

NK5/6: Will modify as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

コメントの追加 [伊藤59]: Same comment as 1.24

~~1.36.1.36.3 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.~~ (JC64)

JC64: See 1.2.2 (6).

NK5/6: Will modify as commented.

~~1.36.2.1.36.4 Occupational health care shall be provided by the Contractor and shall include ~~for~~ example:~~

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [*Working Environment*]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) *Avoiding* (JC65) ~~F~~requent or excessive manual handling of loads, stress and fatigue.

JC65: *Better to add ???*

NK5/6: Will modify as commented.

- (4) *F*itness to work examinations, including eyesight, hearing and physical mobility and capability. (JC66)

JC66: *Is this health care service?*

NK5/6: Will modify as commented.

1.36.3.1.36.5 The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:

- (1) Health care staff to be assigned at the Site.
- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.

コメントの追加 [伊藤60]: See 1.2.2 (6)

コメントの追加 [伊藤61]: Better to add ???

コメントの追加 [伊藤62]: Is this health care service?

- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational ~~H~~healthcare proposal.
- (6) Temporary water and power supply to maintain use during mains supply failure.
- (7) Type of communication facilities and measures for emergency response.

NK: May we know example of emergency response?

Please let me know what facilities you require and I will edit.

NK: We will further consider it.

~~1.36.4 Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site.~~

~~36.6 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC67)~~

JC67: See 1.2.2 (6).

NK5/6: Will modify as commented.

Please refer to my earlier comment under 1.24.6 and for the same reasons I do not recommend that this change be made.

~~1.36.5~~1.36.7 Report of Serious Illness

- (1) The Contractor shall inform the Engineer and submit details of any serious illness.

NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.?

It is up to you. Under GCC 6.7 The Contractor is required to maintain records and make reports concerning health matters to the Engineer as the Engineer may reasonably require. This is a further suggestion to try to reduce the volume and contents of report to be prepared.

Please see (4) following, the above can be omitted if required.

- (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures.

NK: Is "HSO" replaced with Contractor as same as (2) above?

No. I do not recommend this. Please refer to the previous notes on this subject, the Contractor may send it but the Health and Safety Officer will prepare it.

- (4) The Engineer is to be consulted on the types of illness for which reports are to be informed.

1.37 Design and Management of Temporary Works

1.37.1 Unless otherwise specified in the Particular Safety Specification, the Contractor is required to comply with the management standard with respect to design, erection, use and dismantling of

コメントの追加 [伊藤63]: See 1.2.2 (6)

Temporary Works provided in Section 1 and Section 2 of BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework, (JC68)

Changed already

JC68: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.

NK5/6: Will modify as commented.

No comment

1.37.2 An alternative standard is acceptable by reference to JSSS 1.4.7 [*Specified Standards and Regulations*] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works ~~including Class A Falsework~~ (JC69).

NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specially referring to the following BS5975?

Section 1: General | Scope "This guidance is also applicable to the design of what is termed class A falsework 1) in BS EN 12812:2004, the design of which is for example specifically excluded from BS EN 12812:2004.

Please also refer to BS 5975, Foreword, page VII, penultimate paragraph.

The European standard on falsework, BS EN 12812, exists in parallel with this British Standard. It specifies performance requirements for the design of falsework in accordance with one of three classes: A, B1 and B2. Limit state design methods are specified for design classes B1 and B2. It does not provide guidance for the structural design of Class A. It is recommended that Section 3 is used to provide guidance for Class A falsework.

It appears to follow that BS EN 12812 is not necessarily an acceptable alternative for example because Class A is excluded, I have assume therefore that it is necessary to state the need for Class A Falsework.

Please be aware that I have not reviewed or studied the BS in detail so please do not assume that I have. I do recommend that it is studied by JICA and NK to ascertain that it is applicable.

Previous clause 1.34.3 regarding alternatives is not now required as I have drafted and included JSSS 1.4.7 [*Specified Standards and Regulations*] to cover this generally.

Previous clause 1.34.6 has already been deleted.

There is no need for the suggested insertion into the following clause (previous Clause 1.34.7) as per the said comment.

JC69: delete it?

NK5/6: Will delete as commented because the sentence is for the management of Temporary Works, so Class A Falsework; one of TWs, is not needed to be specially mentioned.

No comment

1.37.3 It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.

1.37.4 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.

1.37.5 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.

~~1.37.6 Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].~~

JC: JICA commented as follows:

コメントの追加 [岡本64]: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.

Issue 6 1.34.8 Too much to require the Contractor name all the specialist staff at the Bid stage. It is also excessive to require consent of the Engineer for those specialist staff.

“Necessary qualification” can be combined with 1.34.12 or 1.34.13.

Issue 6 1.34.9 If comply with JSSS1.9, all the specialist staff shall be appointed before the commencement, and subject to the Engineer’s consent.

NK: From this comment, the 1.37.12 below is enough requirement. 1.37.6 above specifies to refer to 1.12, which 1.12 is for HSO, it seems difficult to apply for personnel of TW.

As 1.3.12 specifies requirement and necessity of consent of the Engineer, we propose to delete 1.37.6.

Understand your comment and have no objection to the deletion of 1.37.6.

1.37.7 Without affecting the Contractor’s responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor’s Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [Contractor’s Method Statements]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor’s design or methods.

The Engineer ~~may has no obligation under the Contract to~~ review Temporary Works design, ~~however he may choose to do so~~ for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 ~~or any other acceptable standard in accordance with JSSS 1.37.2. The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [Engineer’s Duties and Authority] Sub-Subclause (c) and issued without prejudice to the Contractor’s overriding responsibility for the safety and adequacy of the Temporary Works.~~

I have given further thought to the following clause which was originally considered as an exception. I am now of the opinion that offering such alternative to an Employer to state his requirements in the PSSS is not a good idea as it may result have a negative effect.

Most JICA funded projects are large projects and will have a Temporary Works content.

I suggest that the following alternative clause should be deleted to make these important requirements very clear.

If there is only a small and simple TW content, even if the BS 5975 is applied it will not cause any major harm or cost.

The sample specification provided some time back by JICA for the Hong Kong Project showed that all work shall comply with the BS. (JC70).

NK: MD 氏は上記の理由で次の 1.37.8 の条項は不要であると考え削除を提案しています。ご検討をお願いいたします。

JC70: Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

NK5/6: Will modify as commented.

Will look at this when I review the user guide

1.37.8 ~~Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:~~

- ~~(1) — Appointment of appropriately qualified and experienced staff.~~
- ~~(2) — Preparation of adequate Temporary Works designs.~~
- ~~(3) — Independent internal or external checking of the Temporary Works Design.~~

コメントの追加 (伊藤65): Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

- ~~(4) Preparation of a Temporary Works register and records~~
- ~~(5) Pre erection inspection of all Temporary Works, including materials, components and equipment.~~
- ~~(6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to:
 - ~~(a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO Contractor of a suitable sign showing it as complete and safe to use; and~~
 - ~~(b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO Contractor of a suitable sign showing that it is ready for dismantling.~~~~

NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause,

we consider HSO will be replaced with Contractor as JICA commented:

Should it be HSO? When BS5975 applies. TWC/TWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?

The above applies when BS 5975 doesn't therefore I suggest (subject to JICA and NK agreement) that this can be deleted.

However, yes, the Temporary Works staff are all involved to make sure that the Temporary Works are designed and executed correctly, however the HSO is ultimately responsible for ALL safety on the Works and nothing should avoid his overview. I recommend that this should remain as HSO. I believe that it is a correct requirement which in practice should not be more than a counter signature.

1.37.9 In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.

NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?

I understand and agree with your comment. However, JSSS 1.18 gives rules for the proper placement of Contractor's Personnel and it probably better therefore to rephrase this as above.

The following clause can be deleted

~~1.37.10 For further information on Method Statements refer to JSSS 1.9 [Contractor's Method Statements].~~

1.37.11 For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].

1.37.12 Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties. ~~and shall obtain the consent of the Engineer.~~

NK: We think 1.3.12 is too long sentence to clearly understand requirement.

Yes I agree and have reworded this as above.

Q-1 Is consent by the Engineer given to specialist staff?

This part can be deleted.

Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?

We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.

Have reworded all, please refer to this above.

1.38 User Training (Deleted) User Training(Jc71)

JC71: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.

NK5/6: Will delete as commented.

I am informed that my comment is not required on "blue" shaded items, therefore none is provided

Note for NK: This is safety during construction, it refers to the provision of effective safety training for equipment and systems provided during under ODA construction contracts.

NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

~~Recommendation that it be included here as a default requirement.~~

- ~~1.38.1. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.~~
- ~~1.38.2. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.~~
- ~~1.38.3. User Training shall vary according to the scope of the Works however it shall generally cover the following:~~
- ~~(1) Safe system and Plant use, operation and process control.~~
 - ~~(2) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements~~
 - ~~(3) Training in use of all hardware and software packages.~~
 - ~~(4) Laboratory control (sampling and analysis) including operation of laboratory equipment.~~
 - ~~(5) Recording and reporting.~~
 - ~~(6) Emergency operation procedure.~~
 - ~~(7) Maintenance management procedures.~~
 - ~~(8) Inventory and store control systems.~~
 - ~~(9) Particular safety procedures, including:~~
 - ~~(a) Safe working procedure;~~
 - ~~(b) Housekeeping of the facilities;~~
 - ~~(c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and~~
 - ~~(d) Safety measures for the Works and all items of Plant.~~
- ~~1.38.4. Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.~~
- ~~1.38.5. The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.~~
- ~~1.38.6. Other requirements for User Training~~

コメントの追加 [岡本66]: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.

- ~~(1) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.~~
- ~~(2) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.~~
- ~~(3) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.~~
- ~~(4) The Engineer may choose to send representatives to witness the training.~~
- ~~(5) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.~~
- ~~(6) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.~~
- ~~(7) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty-six (56) days before any training commences.~~
- ~~(8) Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.~~
- ~~(9) The Contractor shall use visual media as much as possible throughout the training process.~~
- ~~(10) Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.~~
- ~~(11) The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.~~
- ~~(12) Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.~~
- ~~(13) The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.~~
- ~~(14) The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.~~
- ~~(15) Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.~~
- ~~(16) The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty-six (56) days.~~

- ~~(17) Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week days.~~
- ~~(18) Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.~~
- ~~(19) The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.~~

1.38 Unexploded Ordnance (UXO)

NK: we considers JICA may not specify 1.39 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

MD's reply: The Employer should inform the Contractor of the likely existence of UXO and if possible remove. The Contractor shall report any UXO then found to the Employer/Engineer for further instruction. This needs to be included in JSSS and the User Guide so that both parties are aware of the other's obligations. I have edited this to make the Employer responsible and have and separated accordingly.

NK: We have no comments to 1.39. xd v

For your further information, please note that this is an Employer's Risk under GC 17.3 (d).

The problem is, that GC 17.3 places no obligation upon the Employer (who should be more aware than anyone of the possible risk) to advise of the existence, to survey and remove such UXO before bidding or after if then encountered.

This is the reason behind including this in JSSS.

This clause may need some slight modification when I again work on the User Guide.

- 1.39.1 If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.
- 1.39.2 Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.
- 1.39.3 Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.
- 1.39.4 Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.
- 1.39.5 Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy of the further clearance certificate together with any further instructions from the Engineer.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:

- (1) **“Executing Agency”** means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer.
- (2) **“GC”** and **“PC”** followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) **“Health and Safety Officer”** or **“HSO”** means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [*Health and Safety*] as construed in accordance with JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].
- (4) **“JICA Standard Safety Specification”** or **“JSSS”** means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works.
- (5) **“Method Statement”** means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] and supplemented by JSSS 1.9 [*Contractor’s Method Statements*].
- (6) **“Operation Leader”** (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations and who can also be referred to within the OSHA definition as a “Competent Person”.
- (7) **“OSHA”** means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- (8) **“Particular Safety Specification”** means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project ~~as illustrated in Annex 1.4 [Figures and Illustrations].~~
- (9) **“Project Safety Specification”** means the document that contains Part 1 [JSSS] and Part 2 [*Particular Safety Specification*] ~~as illustrated in Annex 1.4 [Figures and Illustrations].~~
- (10) **“Project”** means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (11) **“Safety Plan”** means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the

entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor's General Obligations*] as supplemented by JSSS 1.7 [*Contractor's Safety Plans*].

- (12) **"Safety"** shall also mean "occupational health and safety" and "health and safety".
- (13) **"User Guide for the Use of Executing Agencies"** means the document of that title separately published by JICA for the Executing Agencies and which contain the guides for incorporation of JSSS into the bidding and contract documents for relevant Projects.

NK: There is no "User Guide" specified in JSSS. Does it necessary to define it in JSSS?

I think as it will be published on line probably at the same time as JSSS, it does need definition and more importantly, it requires a clear statement in JSSS, that it is NOT a part of the Contract (see added clause JSSS 0).

It is my understanding that the User Guide is for the reference of the Employer only and it is probably also a good idea therefore to describe it as "An Employer's Guide" or something like that to make it very clear.

Please refer to my earlier notes repeated above from the previous issue of the draft.

Following my further review and study, I feel that this is an important issue which if not addressed, may create unnecessary future risk for JICA

Please refer to my notes on this subject under Clause 1.3.2 and consider changing the title of the "User Guide" perhaps to "Guide for the Use of Executing Agencies"

NK6/6: We proposed JICA to change the title as you proposed "Guide for the Use of Executing Agencies". The stipulation of User Guide is deleted in JSSS, so I think (13) "User Guide" is not necessary as directly related with the Contractor. Please review the above modification.

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

- (1) **"Accident Response"** means the requirements for the Contractor's response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [*Accident Response Plan*].
- (2) **"Confined Spaces"** means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) **"Cofferdam"** means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.
- (4) **"Dangerous Goods"** means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (5) **"Dangerous Work"** means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.
- (6) **"Diver"** means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.

For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [*Diving Works*].

- (7) “**Earthwork Support**” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.
- (8) “**Elevated Access Structures**” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.
- (9) “**Emergency Response**” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.26 [*Emergency Response Plan*].
- (10) “**Falling Objects**” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.
- (11) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (12) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.
- (13) “**Hazardous Substances**” means any substance, whether solid, liquid or gas, that may cause harm to health.
- (14) “**Hazardous Areas**” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. ~~Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as Zone 0, Zone 1 or Zone 2, where:~~
 - ~~(a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;~~
 - ~~(b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and~~
 - ~~(c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.~~

NK: May we know the source of Classification?

May we know if this Zones are specified in JSSS?

Classification of Zones is from the Technical Measures Document of HSE

<https://www.hse.gov.uk/comah/sragtech/techmeasareaclas.htm>

OSHA also have a classification which is more complicated.

Please be aware that in the absence of information in your draft, this is my suggestion but in every case and I rely on JICA and NK to check and confirm this. If you do not want to use this, please advise me and I will delete.

NK/6: Chapter 2 specifies as follows:

2.1.5. Further Requirements for Dangerous Work

Further to the requirements of JSSS 1.22 [*Dangerous Work*] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, r ...

We want to specify as (14) without specifying Zones o to 2.

- (15) **“Hoisting Operation”** means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.
For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [*Hoisting and Rigging*].
- (16) **“Operational Area”** means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.
- (17) **“Personal Fall Arrest System”** or **“PFAS”** means a fall protection system that is designed to arrest a worker in a fall from a working level.
- (18) **“Personal Fall Restraint System”** or **“PFRS”** (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.
- (19) **“Personal Protective Equipment”** or **“PPE”** means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.
- (20) **“Safety Belt”** means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.
- (21) **“Safety Harness”** means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.
- (22) **“Scaffold”** or **“Scaffolding”** means a temporary structure or structures that provide access on or from which persons work or to support Goods.
- (23) **“Skill Training”** means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (24) **“Spotter”** means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*].
Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.
- (25) **“Trade Effluent”** means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.
- (26) **“Unexploded Ordnance”** or **“UXO”** shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.

- (27) ~~“User Training” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.~~
- (28) **“Working Platform”** means a platform on or within a scaffold that is intended and designed to support persons or Goods.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

AED	Automatic External Defibrillator
BMGV	Biological Monitoring Guidance Values
CPR	Cardiopulmonary Resuscitation
ODA	Official Development Aid
OJT	On Job Training
PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings
TWA	Time Weighted Average
WEL	Workplace Exposure Limits

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ACI	American Concrete Institute
ANSI	American National Standards Institute.
ASHTO	American Association of State of Highway Transportation Officials
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials.
BS	British Standard.
BS EN	British Standard European Norm.
HSE	UK Health and Safety Executive.
ISO	International Organisation for Standardisation.
ILO	International Labor Organization.
JIS	Japanese Industrial Standards.

A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.

Annex 1.2: Content of Bid Stage Safety Plan

A1.2.1 This Annex lists the required content for the Bid Stage Safety Plan which is to be provided in accordance with “Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works”, published by the Japan International Cooperation Agency (JICA). The Safety plan is to be included in the Bidding Documents Part 1 – Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF-39.

NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?

I think both are useful as the contractor should also be aware of requirements.

It is very important that the Employer/Consultant are prevented from altering the detail of this Annex in their Bidding Documents in any way, as all items are required in the Bid Stage Plan, all are coordinated with JSSS, the same structure, terminology and numbering must be used.

I suggest that this will be reworded something like the following, which I will do when go back to work on the User Guide further.

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor’s Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder’s intentions, so that this can be understood and properly evaluated. (JC72)

JC72: Please add “outline (or policy?) of risk assessment” as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11) “Safety Plan” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods.....

NK5/6: To MD, we would like to ask you to add as commented.

See (2) below:

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder’s Corporate Policy on Health and Safety Management

A description of the Bidder’s corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic company policies on risk assessment and health and safety management,

(compliance with Laws of the Country and description of responsibilities and authority of the Bidder’s head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

Transferred to below

コメントの追加 [伊藤67]: Please add “outline (or policy?) of risk assessment” as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11)
“Safety Plan” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods.....

(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.

A description of the responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams.

Transferred from above

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Bidder's Safety Management System (JC73)

Refer to JSSS 1.5 [*Contractor's Safety Management System*]

~~Confirm~~ Describe how which scheme the Bidder *institutes the Safety Management Systems* accredited under.

JC73: Modified in accordance with modification to JSSS1.5

NK5/6: Will modify as commented.

No comment

(6) Temporary Works

Refer to JSSS 1.37 [*Design and Management of Temporary Works*].

A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.

NK: JICA added "outline" in the last comment.

NK I have amended

(7) Temporary Facilities on Site

The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)

NK: We consider that the above sentence is independent clause from (6) above and locate in some place.

I have edited as above

(8) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.

(9) Safety Plan for the Works

NK: May the title be Works?

I have edited as above

コメントの追加 [岡本68]:
Modified in accordance with modification to JSSS1.5

A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.

(10) Safety Plan for Dangerous Work.

Refer to JSSS 1.22 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [*Definitions and Abbreviations*] and GC 4.1 [*Contractor's General Obligations*].

(11) Permit to Work System

Refer to JSSS 1.23 [*Permit to Work System*]

A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.

(12) Safety Measures for Contractor's Equipment

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(13) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.34 [*Health and Safety Incentive Schemes*]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.

(14) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(16) Site Inspection Plan

A description of the methods for Site inspections by the HSO, types of inspection and frequency.

The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work

(17) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.

(18) Policy for Preventing Traffic Accidents

A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.

(19) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(20) Accident Response Plan

Refer to JSSS 1.23.1 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.

~~It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.~~

NK: We consider that the above sentence is independent clause from (19) above and locate in some place.

Deletion is OK

(21) Health Care Plan

Refer to JSSS 1.36 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(22) Fire Response Plan

Refer to JSSS 2.8 [*Fire Prevention*]

Details of the fire prevention services to be provided at the Site.

The Fire Response Plan required by JSSS 2.8 [*Fire Prevention*]

(23) Emergency Response Plan

Refer to JSSS 1.26 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(24) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [*Contractor's Safety Management Activities*]).

(25) Safety Induction Training

Refer to JSSS 1.20 [*Safety Induction Training*]

An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(26) Skill Training

Refer to JSSS 1.21 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.

~~(27) User Training~~

~~Refer to JSSS 1.38 [*User Training*]~~

~~An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.~~

~~(28)~~(27) Legal Requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.

Annex 1.3: Additional Contractor Forms

Attached Forms:

Form JSSS/BSD - Bidder's Safety Declaration

Form JSSS/SAR - Sample Accident Report

1

Form JSSS/BSO - Bidder's Safety Declaration

[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]

I, [insert name and position of authorised signatory], being duly authorised by [insert name of Bidder/members of joint venture ("JV")] (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSO, hereby declare our commitment to comply with the health and safety requirements of the Contract.

The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.

The Bidder hereby declares that after full investigation and research of domestic resources, he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export (JC74) in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

K74: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standard?

NK5/6: To MD, we would like to ask you to modify as commented.

Please see above

The Bidder declares that he will mobilise for use upon the Works:

1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or recent Contractor's Equipment and Temporary Works, ~~(not more than five (5) years old, not more than five (5) years old,~~ all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.

Please refer to my recommendations and notes in 1.35 and advise me of your requirement.

I note that 5 years has been deleted. Please refer to my further notes under 1.35

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability.
3. Fully inform workers about hazards;

4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand.
5. Keep accurate records of work-related injuries and illnesses.
6. Perform tests in the workplace, such as air sampling as required by the Project Safety Specification.
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.
9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract.
10. Post injury and illness information and data where workers can see them.
11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site*)

Or

Bidder's Head Office Health and Safety Manager*)

Name:

Date: _____

(*Delete as applicable)

Form JSSS/SAR – Sample Accident Report

[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality) (If casualty(ies) is(are) belonging to subcontractor.) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	
8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	

(above to be inserted before all reports)

FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location of accident occurrence:	
4) Brief background and apparent cause:	
5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
6) Physical damages to the Works, Site and any properties of the third parties	
7) Present medical status of casualty(ies):	
8) Present work status:	
9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
10) Accident Report Submission Date	

SUBSEQUENT REPORT INFORMATION (POST-INVESTIGATION):	
1) Cause(s) of the accident:	
2) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:	
3) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
4) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
5) Other Information:	

Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____	Contractor's Health and Safety Officer (HSO)
Receipt acknowledged by: (name): _____ (sign): _____ Report Receipt Date(s) _____ Time: _____	Engineer

(above to be inserted with detail and signatures at end of each report)

~~Annex 1.4: Figures and Illustrations (JC75)~~

~~JC75: Delete if nothing else other than Fig A 1.4.1~~

~~NK5/6: Will delete as commented.~~

~~Attached Documents:~~

~~Fig A1.4.1 Incorporation of JSSS in Bid and Contract Documents (JC76)~~

~~JC76: Move to User Guide 1.3.2~~

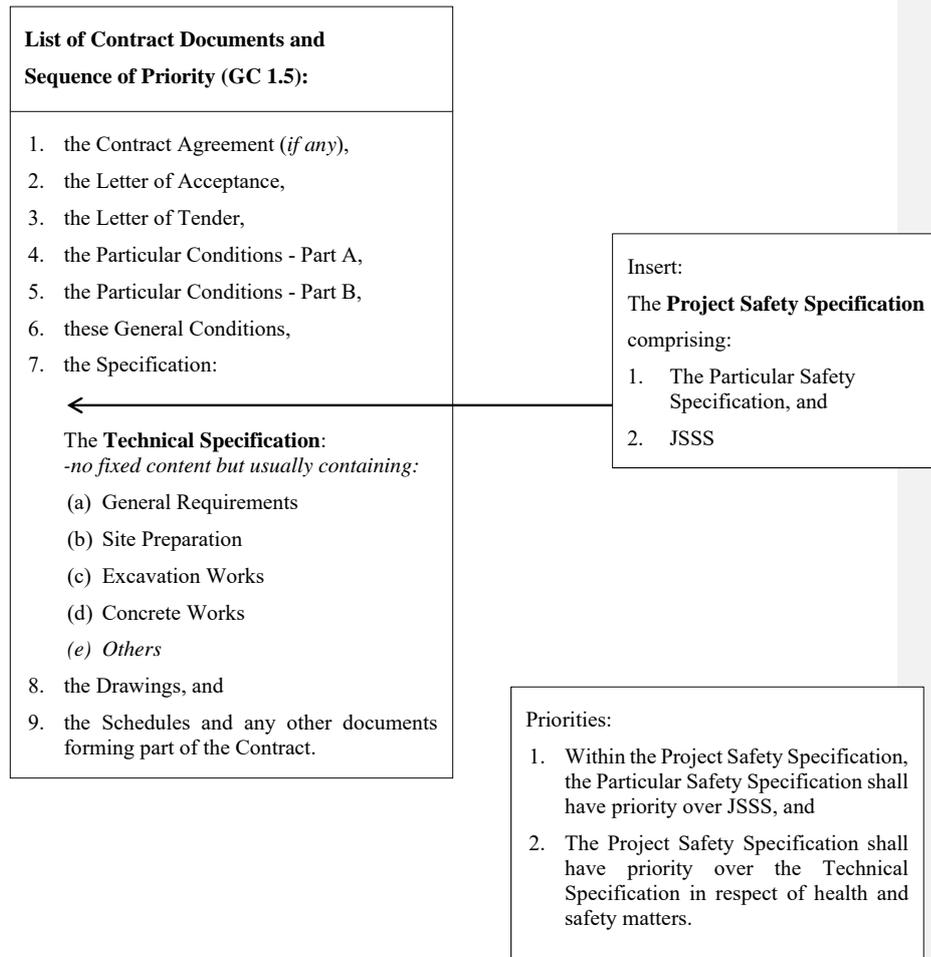
~~NK5/6: Will move as commented.~~

コメントの追加 [伊藤69]: Delete if nothing else other than Fig A 1.4.1

コメントの追加 [伊藤70]: Move to User Guide 1.3.2

Fig. A1.4.1

Incorporation of JSSS in Bid and Contract Documents





JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE ODA



***Japan International Cooperation Agency
(JICA)***

_____, 2020

Prepared: DCI for NK
Issue: 9 (clean copy)
Revision:
Date: 11/06/2020

ACKNOWLEDGEMENTS

JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:

- 1) Japanese Acts, Orders and Ordinances including:
 - Industrial Safety and Health Act*
 - Order for Enforcement of Industrial Safety and Health Act*
 - Ordinance on Industrial Safety and Health*
 - Safety Ordinance for Cranes*
 - Ordinance on Safety and Health of Work under High Pressure*
 - Ordinance on Prevention of Anoxia, etc.*
 - Ordinance on Prevention of Hazards Due to Dust*
 - Explosives Control Act*
 - Order for Enforcement of Explosives Control Act*
 - Ordinance on Explosives Control*
- 2) *OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.*
- 3) *Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.*
- 4) *Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)*

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JICA STANDARD SAFETY SPECIFICATION (JSSS)

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	10.6	Diving Accident Response Plan
11. Railway Works	11.1	} <i>Excluded - to be included in JSSS Second Edition)</i>
12. Road Works	12.1	
13. Bridge Works	13.1	
14. Tunnelling Works	14.1	
15. Dam Works	15.1	
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JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE GOVERNMENT ODA

CHAPTER 1: GENERAL REQUIREMENTS

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

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JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS

1.1 Safety Declaration

- 1.1.1 Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.
- 1.1.2 A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [*Additional Contractor Forms*], Form JSSS/BSD - Bidder’s Safety Declaration,

1.2 General Reference Notes

- 1.2.1 For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [*Definitions and Abbreviations*].
- 1.2.2 The following further general reference notes apply to the content of JSSS:
- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
 - (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
 - (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
 - (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
 - (5) Any reference to academic, educational or vocational qualification **within this document, shall mean a valid qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country or an equivalent alternative certification issued by an acknowledged educational institution of another country.**
 - (6) Unless otherwise stated in JSSS or the context is otherwise clear, any reference in JSSS requiring the provision by the Contractor of health and safety measures **and facilities** for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of the same health and safety measures and **facilities** for Employer’s Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.
 - (7) Any reference in JSSS to “relevant authority” or “relevant authorities” shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.
 - (8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that **Contract**, apply equally and are used in JSSS.

Unless specified otherwise or instructed by the Engineer, the **issue** of JSSS to be used for the **Contract** shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

1.3.1 JSSS shall form a part of the Project Safety Specification which, in turn forms a part of the Specification. The Project Safety Specification shall have priority over the other parts of the Specification in respect of health and safety matters. Within the Project Safety Specification, the Particular Safety Specification shall have priority over JSSS.

1.3.2 The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.

1.4 Compliance with JSSS and Other Regulations

1.4.1 JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.

1.4.2 JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.

1.4.3 The Contractor shall comply fully with the requirements of the Project Safety Specification.

1.4.4 If there are no or insufficient safety provisions in the Laws of the Country, in JSSS or in the Particular Safety Specification for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent.

1.4.5 Specified Standards

(1) Unless otherwise instructed by the Engineer, a reference to any standard (hereinafter deemed to include specified safety regulations or codes) shall mean a reference to the latest issued edition of that standard as at the Base Date of the Contract.

(2) Any standard specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard specified.

(3) Application of detailed parts of any standards specified in JSSS may be waived at the formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.

(4) Where JSSS refers to the standards of other countries, such reference is only to the technical requirements contained in such standards and not to any related laws or legal enforceability of any of those other countries.

1.4.6 Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".

1.4.7 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:

(1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.

(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear.

1.4.8 The Contractor shall comply with the requirements of JSSS throughout the Time for Completion and the Defects Notification Period.

Unless otherwise specified in the Particular Safety Specification, the Contractor's obligations to provide temporary services and facilities shall finish at the end of the Time for Completion.

1.4.9 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.

1.5 Contractor's Safety Management System

1.5.1 The Contractor shall institute a health and safety management system in accordance with ISO 45001 or an equivalent alternative.

1.5.2 Alternatively, the Contractor may institute his own safety management system and regularly conduct audits in accordance with JSSS 1.17 [*Compliance Monitoring and Auditing*].

1.5.3 The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.

1.6 Checking and Validation of Submissions

1.6.1 In accordance with GC 4.9 [*Quality Assurance*] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination, design and supervision staff and any independent checkers as appropriate.

1.7 Contractor's Safety Plans

1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.

1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:

- (1) That are stated in JSSS.
- (2) That comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract.
- (3) That are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel.

1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:

- (1) Bid Stage Safety Plan (Outline Overall Safety Plan).
- (2) Commencement Stage Safety Plan (Updated Bid Stage Safety Plan).
- (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works).

1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level.

1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility.

1.7.6 Bid Stage Safety Plan:

- (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [*Content of Bid Stage Safety Plan*].
- (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated.

1.7.7 Commencement Stage Safety Plan

- (1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site.
- (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.
- (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.

1.7.8 Particular Safety Plans

- (1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.

1.7.9 Procedures for Submission and Review

- (1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the Works or any part of the Works.
- (2) The Contractor shall submit:
 - (a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [*Commencement Stage Safety Plan*]; and
 - (b) The Particular Safety Plans by the date fourteen (14) days prior to the commencement of each particular part of the Works where sufficient detail has not been included in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.
- (3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:
 - (a) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;
 - (b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and
 - (c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of

the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.

- 1.7.10 The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.
- 1.7.11 Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.
- 1.7.12 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.

1.8 Risk Assessment

- 1.8.1 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.
- 1.8.2 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.
- 1.8.3 The procedural flow of risk assessment shall be as follows.
- (1) Identifying hazards.
 - (2) Evaluating risks.
 - (3) Determining measures of risk reduction or elimination.
- 1.8.4 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:
- (1) Removal of hazards such as eliminating dangerous methods of construction.
 - (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.
 - (3) Engineering measures.
 - (4) Management measures including improving skills with additional training.
 - (5) Use of PPE.

1.9 Contractor's Method Statements

- 1.9.1 The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.
- 1.9.2 Method Statements shall be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and include details of all Permanent Works and Temporary Works with supporting documents such as:
- (1) Studies, investigations and designs.
 - (2) Structural calculations and any other calculations.
 - (3) Specifications and technical details.
 - (4) Proposed construction procedure, sequence and method.
 - (5) Construction resources including superintendents, workers, operation leaders and Contractor's Equipment.
 - (6) Inspection and monitoring plan.

- 1.9.3 The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.
- 1.9.4 Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.

Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:

- (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.
- (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.
- (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.
- (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.
- (5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.

1.10 Engineer's Safety Representative

- 1.10.1 The Engineer may delegate his power and authority to any of his assistants at the Site who shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS.
- 1.10.2 The terms of the appointment shall be in accordance with GC 3.2 [*Delegation by the Engineer*].
- 1.10.3 Whenever the term "Engineer" is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.

1.11 Safety Compliance Instructions from the Engineer

- 1.11.1 Without affecting or diminishing the Contractor's responsibility under GC 4.1 [*Contractor's General Obligations*] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.
- 1.11.2 If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [*Suspension of Work*] until the Contractor has advised the Engineer of the

proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.

1.11.3 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [*Suspension of Work*] and not allow work to recommence until such time as:

- (1) The cause has been investigated and established by the Contractor.
- (2) Corrective and preventive measures have been formulated by the Contractor and proposed to the Engineer.
- (3) The Engineer's consent has been obtained for such measures.
- (4) The measures have been implemented to ensure that no such accident can reoccur.

1.11.4 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.

1.12 Health and Safety Officer at the Site (HSO)

1.12.1 For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7 [*Health and Safety*], shall be construed as "Health and Safety Officer at the Site".

1.12.2 Requirements for the HSO:

- (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.
- (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [*Contractor's Personnel*], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [*Health and Safety*].
- (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [*Law and Language*], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) Where there is no legal requirement under the Laws of the Country and unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as:
 - (a) an International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK; or
 - (b) Certification as a Certified Safety Professionals (CSP) by the Board of Certified Safety Professionals (BCSP) in USA; or
 - (c) an equivalent alternative internationally recognised qualification covering health and safety and risk management.

- (8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management and whom the Contractor considers is qualified and able to perform the duties subject to receiving the consent of the Engineer.

1.12.3 Supporting Personnel

- (1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.
- (2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.
- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) The HSO shall prepare an internal procedure for the management of his supporting personnel, to ensure that:
 - (a) Supporting personnel are made aware of the requirements for any inspection and the details thereof;
 - (b) Supporting personnel immediately advise the HSO of any unsafe conditions with recommendations to prohibit the start or to stop or to change safety practices for the particular work; and
 - (c) Communications and submissions between HSO and supporting personnel are efficient, timely and clear.

Following implementation and compliance with the above procedure, the HSO shall sign all inspection records as if the inspection has been carried out by the HSO.

- (6) Where the Works or any part of the Works is to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified supporting personnel for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

1.12.4 Inspections

- (1) The HSO shall be responsible for ensuring:
 - (a) That all working areas are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;
 - (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to all affected persons and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and
 - (c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE].

- (2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.

1.13 HSO - Scope of Duties and Authority

1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.

1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:

- (1) Health and Safety Management Work:
- (a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;
 - (b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;
 - (c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;
 - (d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;
 - (e) Temporarily stopping the Works or **any part** of the Works where the Engineer so instructs in accordance with JSSS 1.11 [*Safety Compliance Instructions from the Engineer*];
 - (f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;
 - (g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;
 - (h) Appointment of further supporting personnel (refer to 1.12.3 [*Supporting Staff*]);
 - (i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;
 - (j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;
 - (k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;
 - (l) Planning and implementation of various training and education implementation plans;
 - (m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;
 - (n) Preparing regular internal and external reports on health and safety activities; and
 - (o) Hazard prediction activity.

1.14 Procedure for Resuming the Works

1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [*Safety Compliance Instructions from the Engineer*] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [*HSO - Scope of Duties and Authority*] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:

- (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.
- (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.
- (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.
- (4) If the Engineer gives no such notice of non-compliance for the original proposal within **seven (7) days** of the date of receipt or for the resubmitted proposal within **seven (7) days** of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving **three (3) days'** notice in writing of the resumption date.
To be proactive, the Engineer may give consent at any stage within the above stated time scales.
- (5) The Contractor resumes the Works or part of the Works on the due date.
- (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.
- (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.

1.15 Contractor's Safety Management Activities

1.15.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.

1.15.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):

- (1) Overall Safety Management Activities:
 - (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM);
 - (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and
 - (c) Monitoring the implementation of the Safety Plan.
- (2) **Daily** Safety Management of Contractor's Personnel:
 - (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM;
 - (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures;
 - (c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as:
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
 - (d) Instruction and management of safety education and training;
 - (e) Instruction and management of all safety measures; and

(f) Site Safety Inspections.

1.16 Joint Site Safety Inspections

- 1.16.1 In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.
- 1.16.2 Frequency of Joint Site Safety Inspections shall be at least once a week.
- 1.16.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.
- 1.16.4 The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.
- 1.16.5 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.

1.17 Compliance Monitoring and Auditing

- 1.17.1 The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured. Such compliance shall be monitored efficiently and transparently at all times, for which purpose the Contractor shall:
- (1) Create checklists for monitoring.
 - (2) Carry out regular and random inspections.
 - (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents.
 - (4) Create storage and filing systems for the monitoring records.
 - (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer.
- 1.17.2 Safety inspections are intended to search for risks and hazards, which present a threat to safe working.
- 1.17.3 The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:
- (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements?
 - (2) Are the Safety Plan requirements being met?
 - (3) Is there documented proof of compliance?
 - (4) Is health and safety training effective?
 - (5) Is the Contractor's health and safety management system working effectively?
- 1.17.4 The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.
- 1.17.5 The audit procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer.
- 1.17.6 The audit shall be headed by a senior member of the Contractor's head office health and safety team.
- 1.17.7 If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.
- 1.17.8 The HSO may attend audits but only in an advisory capacity and team members shall not be

required or allowed to audit their own work.

- 1.17.9 The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.
- 1.17.10 The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems. The Audits shall not replace the regular health and safety inspections.
- 1.17.11 The audits shall be conducted at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.
- 1.17.12 An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.
- 1.17.13 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.

1.18 Proper Placement of Contractor's Personnel

- 1.18.1 To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.
- 1.18.2 In compliance with GC 6.9 [*Contractor's Personnel*], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.
- 1.18.3 Workers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.
- 1.18.4 The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.
- 1.18.5 The HSO shall countersign all records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.
- 1.18.6 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:
- (1) Work content and work environment.
 - (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability.
 - (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.
 - (4) Allocation of an achievable and safe work volume and time.
 - (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [*Child Labour*].

- 1.18.7 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.
- 1.18.8 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.
- 1.18.9 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that the HSO resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.

1.19 Safety Training Generally

- 1.19.1 The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.
- 1.19.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.
- 1.19.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.
- 1.19.4 Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate).

1.19.5 Training Personnel

- (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
- (2) All trainers shall be fluent in the language of the persons to be trained.
- (3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.

1.19.6 Records of education and training

The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.

1.20 Safety Induction Training

1.20.1 Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom he is responsible, including the Employer's Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.

1.20.2 The following subjects shall be covered:

- (1) Responsible persons, chain of command and means of communication.
- (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.
- (3) Working procedures generally.
- (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.
- (5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [*Dangerous Work*] for additional training requirements.
- (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment.
- (7) Maintaining all working areas in an orderly, tidy and clean condition at all times.
- (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting.
- (9) Firefighting; actions, precautions and control.
- (10) Health and safety rules.
- (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.
- (12) Emergency Response Plan; evacuation and calling list.
- (13) Other related health and safety matters.

1.20.3 Practical on-Site demonstrations shall be included.

1.21 Skill Training

1.21.1 The Contractor is reminded of his obligations under GC 6.9 [*Contractor's Personnel*] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations.

1.21.2 The Contractor is also reminded of his obligations under GC 6.1 [*Engagement of Staff and Labour*] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if the qualified, skilled and experienced Contractor's Personnel required by the Contract is not available in the Country or not available in the numbers or of the standards for the periods required, the Contractor shall:

- (1) Source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, and/or
- (2) Recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.

This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion and Defect Notification Period.

- (1) The Contractor shall test and qualify such personnel and provide them with formal

written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

- (2) Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.
- (3) Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [*Contractor's Personnel*]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his **information**.

1.21.3 Further Training of Operation Leaders and Skilled Workers

- (1) Unless otherwise specified in the Particular Safety Specification and without limiting or changing the Contractor's obligations under the Contract, the Contractor shall be required to select candidates from his local skilled and unskilled workforce that he considers are suitable to act as future Operation Leaders and skilled workers, respectively.
- (2) Training of Operation Leaders
 - (a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their management abilities, skill levels and awareness of international safety and quality standards.
 - (b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability, skills and awareness and also to pass on their knowledge in future to their working colleagues and compatriots.
- (3) Training of Skilled Workers
 - (a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their skill levels and awareness of international safety and quality standards.
 - (b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability, skills and awareness according to the work and also to pass on their knowledge in future to their working colleagues and compatriots.
- (4) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his **information**.
- (5) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.
- (6) Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.

1.21.4 Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

1.22 Dangerous Work

1.22.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.22.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special

training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

- 1.22.3 The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [*Permit System*] that is to be worn conspicuously and be available for validation by the Engineer.
- 1.22.4 The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by **specialty** trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.
- 1.22.5 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.
- 1.22.6 The Contractor shall train and equip teams of selected workers at the Site for emergency rescue operation in accordance with JSSS 1.24 [*Accident Response Plan*].
- 1.22.7 The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.
- 1.22.8 Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.
- 1.22.9 For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [*Prohibition of Entry – Dangerous Work*].
- 1.22.10 Hazardous Substances.
 - (1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.
 - (2) The Contractor shall submit detailed Safety Plans and Method Statements with respect to the removal and disposal of the Hazardous Substances to the Engineer in accordance with JSSS 1.7 [*Contractor's Safety Plans*] and JSSS 1.9 [*Contractor's Method Statements*].

1.23 Permit to Work System

- 1.23.1 The Contractor shall prepare and implement a “Permit to Work System” and a description of this shall be included in the Safety Plan.
- 1.23.2 The system shall be designed to control safety for Dangerous Work.
- 1.23.3 The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.
- 1.23.4 Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.
- 1.23.5 The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

- 1.24.1 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.
- 1.24.2 Unless otherwise specified in the Particular Safety Specification, medical, first aid and related services and facilities at the Site for accidental injuries shall be made available free of charge for the use of the Contractor's Personnel, the Employer's Personnel all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such medical services and facilities shall also be made available free of charge for the family members of the aforementioned personnel/persons.
- 1.24.3 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.
- 1.24.4 The Contractor shall provide the following medical and first aid facilities:
- (1) Deployment of appropriate first aid appliances, aids, instruments and medicines.
 - (2) First aid training, appointment of first aiders and dissemination of information.
 - (3) Type of communication facilities and measures for emergency response.
 - (4) Medical Facilities on the Site together with description of equipment and consumables.
 - (5) Temporary water and power supply to maintain use during mains supply failure.
 - (6) Transportation facilities to be provided to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.
 - (7) Additional facilities specified in the Particular Safety Specification, if any.
- 1.24.5 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical services and facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all relevant personnel.
- 1.24.6 The Contractor shall train selected Contractor's Personnel to perform emergency rescue in a safe manner in the event of any accident. Workers so trained are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.
- 1.24.7 Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.
- 1.24.8 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.
- 1.24.9 Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].
- 1.24.10 Adequate first aid equipment and supplies shall in any case be readily available at the Site and as referred to in JSSS 2.9 [PPE and First Aid].

1.25 Measures at the Time Accidents Occur

- 1.25.1 When an accident occurs, the HSO shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:
- (1) Safely locate and extract casualties.

- (2) Provide first aid treatment at the Site.
 - (3) Implement Secondary accident prevention activities, including:
 - (a) Preserving the accident site, make safe and prevent anyone interfering or entering;
 - (b) Discontinuing construction work related to or in the vicinity of the accident; and
 - (c) Implementing any further measures instructed by the Engineer.
- 1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.
- (1) The Contractor shall inform the Engineer and submit details of any accident.
 - (2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.
 - (3) The Accident Report shall include details of the recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [*Additional Contractor Forms*].
- 1.25.3 For resumption of work procedures, refer to JSSS 1.14 [*Procedure for Resuming the Works*].

1.26 Emergency Response Plan

- 1.26.1 To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.
- 1.26.2 The Contractor shall take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, and to avoid, overcome or lessen the effects to a reasonable extent.
- 1.26.3 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:
- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
 - (2) The safety and stability of the Works and Goods.
 - (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.
- 1.26.4 Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage from such flooding, earthquake or volcanic activity.
- Such measures to be implemented shall include:
- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to all relevant persons, including third parties and property not connected with the Works but potentially affected thereby.

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- (2) Provision of temporary support to all sides and soffits of excavations or portal of tunnelling of sufficient strength, durability and suitability.
 - (3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.
- 1.26.5 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [*Contractor's General Obligations*] and JSSS 1.9 [*Contractor's Method Statements*].
- 1.26.6 The Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.
- 1.26.7 The Emergency Response Plan, shall cover:
- (1) Evacuation plan, showing evacuation routes and assembly points.
 - (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
 - (3) Emergency contact system.
 - (4) Use of existing and available medical and other related facilities.
 - (5) Emergency stocks of bottled water, lights, ropes, shovels.
- The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.
- 1.26.8 The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.
- The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.
- The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.
- The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:
- (1) Employer's Personnel at the Site and also at their respective head office where different.
 - (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.
 - (3) Contractor's Personnel at the Site and also at the head office where different.
 - (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.
- 1.26.9 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.
- Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.

1.26.10 If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.

1.26.11 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.

1.26.12 For further measures and requirements refer to JSSS 2.7 [*Adverse Weather Requirements*].

1.27 Contractor's Safety Committee and Regular Safety Meetings

1.27.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.

1.27.2 Members of the Contractor's Safety Committee shall include:

- (1) Contractor's Representative.
- (2) HSO.
- (3) Medical and first aid staff.
- (4) Contractor's senior site staff.
- (5) Contractor's head office safety manager (as necessary).
- (6) Subcontractors' representatives, health and safety personnel, site staff.
- (7) **Representative of labour union, if any.**
- (8) (If necessary) Representatives of the relevant government authorities and agencies.
- (9) Any other necessary personnel.

1.27.3 The HSO shall be the chairman of the Safety Committee.

1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:

- (1) Frequency of the meetings: At least once a month.
- (2) Agenda:
 - (a) Accidents, fatalities, injuries occurred **in the previous month** and measures **to be taken** to prevent any reoccurrence;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Feedback on the regular safety, coordination and other meetings with the Engineer;
 - (d) Safety instructions received from the Engineer;
 - (e) Items to be coordinated with police, fire department and other related organisations;
 - (f) Compliance and registration requirements under the Laws of the Country;
 - (g) Safety and health awards, media attention and the like;
 - (h) **Hazards, safety and health problems identified by any members of the Safety Committee;**
 - (i) Effectiveness of existing Safety Plans and suggestions for revision and improvement; **and**
 - (j) Other matters.

1.27.5 Report on the Safety Committee Meetings

The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.

A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.

1.28 Engineer's Regular Safety Meetings

1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:

- (1) Frequency of the meetings: Once a month.
- (2) Agenda:
 - (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
 - (b) Monthly or weekly schedule of important health and safety matters;
 - (c) Accidents, fatalities, injuries **in the previous month** and measures **to be taken** to prevent any reoccurrence;
 - (d) Hazards, safety and health problems identified by any members of the Safety Committee;
 - (e) Status of resolution of previous problems;
 - (f) Items to be coordinated with police, fire department and other related organisations;
 - (g) Compliance and registration requirements under the Laws of the Country; and
 - (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.
- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.
- (5) The Engineer shall issue a formal instruction for any variation requests.

1.29 Project Safety Committee

1.29.1 On larger Projects with multiple contract packages and contractors and unless otherwise stated in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.29.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).

- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.29.3 The Chairman of the Safety Committee shall be the Employer.

1.29.4 The Employer shall hold Project Safety Committee meetings, **periodically as requested by the Employer.**

1.29.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.

1.30 Health and Safety Coordination with Other Contractors

1.30.1 Refer to GC 2.3 [*Employer's Personnel*] and GC 4.6 [*Co-operation*] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) The Employer's Personnel.,
- (2) Any other contractors employed by the Employer,
- (3) The personnel of any **relevant authorities**, who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [*Safety Procedures*] and GC 4.18 [*Protection of the Environment*].

The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.

When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.

1.30.2 The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.30.3 If any other contractors are employed by the Employer or if any **relevant authorities** responsible to the Employer **are** working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: as and when considered necessary by Engineer.
- (2) Unless otherwise agreed, attendees shall include **representatives of the Employer, Contractor and any other contractors and relevant authorities who may be employed in the execution of any work on or near the Site not included in the Contract**
- (3) Agenda should relate to coordination among different contractors including for example:

- (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
- (b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any **relevant authorities**;
- (c) Accidents, injuries **in the previous period** and measures **to be taken** to prevent any reoccurrence;
- (d) Status of resolution of previous problems;
- (e) Items to be coordinated with police, fire department and other related organisations;
- (f) Compliance and registration requirements under the Laws of the Country;
- (g) Safety and health awards, media attention and the like; and
- (h) Other matters.

1.30.4 Report on the Health and Safety Coordination Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.
- (3) A further copy shall be included in the **Contractor's** monthly progress report.

1.31 Safety Statistics

1.31.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.

1.31.2 Actual statistics shall include the following:

- (1) **Accident: description, casualties, location, time, type and cause.**
- (2) **Near-miss: description, location, time, type and cause.**
- (3) **Lost-time: lost hours of casualties, duration of discontinuation.**
- (4) **Total working hours for calculation of frequency rate, severity rate and annual incident rate.**
- (5) **Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.**
- (6) **Number of health and safety staff.**
- (7) **Number of candidates given safety induction and other training.**
- (8) **Number of safety inspections,**
- (9) **Number of detections of non-compliant, unsafe or lack of Contractor's Equipment.**
- (10) **Number of instructions issued for failure to use PPE, or inadequate or ineffective PPE.**
- (11) **Number of Engineer's Instructions issued for work suspension.**
- (12) **Number of HSO instructions issued for work stoppage.**
- (13) **Others.**

1.31.3 All data shall be in a format and content given consent by the Engineer.

- 1.31.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.
- 1.31.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under **JSSS 1.33** [*Safety Reports*].

1.32 Health and Safety Records

- 1.32.1 The Contractor shall keep health and safety records for the following:
- (1) Inspection records and checklists.
 - (2) Meetings for safety and health management.
 - (3) Monitoring of safety and health management activities.
 - (4) Health and safety education and training for the Contractor's Personnel.
 - (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.
 - (6) Work environment records and other records required by JSSS Chapter 2 [General Safety Measures] and other parts of JSSS.
 - (7) Record of reports as may be required by government authorities.
 - (8) Detection of non-compliant, unsafe or lack of Contractor's Equipment.
 - (9) Instructions issued for unsafe behaviour or unsafe site conditions.
 - (10) Instructions issued for failure to use PPE, or inadequate or ineffective PPE.
 - (11) Engineer's Instructions issued for work suspension.
 - (12) HSO instructions issued for work stoppage.
 - (13) Others.
- 1.32.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.
- 1.32.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under **JSSS 1.33** [*Safety Reports*].

1.33 Safety Reports

- 1.33.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:
- (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.
 - (2) Contractor/HSO and Joint Site Safety **Inspection Reports**.
 - (3) Weekly Safety Report: summary of safety matters of the week.
 - (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [*Progress Reports*].

1.34 Health and Safety Incentive Schemes

- 1.34.1 The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for **the purpose of promoting workplace safety**.

- 1.34.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.
- 1.34.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.
- 1.34.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.
- 1.34.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.
- 1.34.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.
- 1.34.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.
- 1.34.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under **JSSS 1.33 [Safety Reports]**.

1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE

- 1.35.1 Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.

All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.

- 1.35.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.

If the HSO ascertains at any time that any items are **not suitable for use**, he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.

- 1.35.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.

If, as a result, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such

Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.

1.35.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:

- (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.
- (2) New or up to date Contractor's Equipment and Temporary Works, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works.

1.36 Health Matters

1.36.1 The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.36.2 Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall be made available free of charge for the use of the Contractor's Personnel, the Employer's Personnel all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such healthcare services and facilities shall also be made available free of charge for the family members of the aforementioned personnel/persons.

1.36.3 Occupational health care shall be provided by the Contractor and shall include:

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) Avoiding frequent or excessive manual handling of loads, stress and fatigue.
- (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability.

1.36.4 The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:

- (1) Health care staff to be assigned at the Site.
- (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.
- (3) Healthcare services to be provided including lectures and education on health matters.
- (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.
- (5) Occupational healthcare proposal.
- (6) Temporary water and power supply to maintain use during mains supply failure.

1.36.5 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare services and facilities, or where local health authorities

do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect **all relevant personnel**.

1.36.6 Report of Serious Illness

- (1) The Contractor shall inform the Engineer and submit details of any serious illness.
- (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.
- (3) The report shall include details of the HSO's recommended counter-measures.
- (4) The Engineer is to be consulted on the types of illness for which reports are to be informed.

1.37 Design and Management of Temporary Works

1.37.1 Unless otherwise specified in the Particular Safety Specification, the Contractor **is required to comply with BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework**.

1.37.2 An alternative standard is acceptable by reference to **JSSS 1.4.5** [*Specified Standards and Regulations*] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works.

1.37.3 It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.

1.37.4 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.

1.37.5 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.

1.37.6 Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.

The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [*Contractor's Method Statements*]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.

The Engineer may review Temporary Works design for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 or any other acceptable standard in accordance with JSSS 1.37.2.

1.37.7 For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [*Inspection and Monitoring of Temporary Works*].

1.37.8 Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties.

1.38 Unexploded Ordnance (UXO)

- 1.38.1 If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.
- 1.38.2 Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.
- 1.38.3 Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.
- 1.38.4 Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.
- 1.38.5 Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy of the further clearance certificate together with any further instructions from the Engineer.

ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS

Annex 1.1: Definitions and Abbreviations

A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:

- (1) “**Executing Agency**” means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer.
- (2) “**GC**” and “**PC**” followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause.
- (3) “**Health and Safety Officer**” or “**HSO**” means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [*Health and Safety*] as construed in accordance with JSSS 1.12 [*Health and Safety Officer at the Site (HSO)*].
- (4) “**JICA Standard Safety Specification**” or “**JSSS**” means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works.
- (5) “**Method Statement**” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] and supplemented by JSSS 1.9 [*Contractor’s Method Statements*].
- (6) “**Operation Leader**” (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations and who can also be referred to within the OSHA definition as a “Competent Person”.
- (7) “**OSHA**” means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.
- (8) “**Particular Safety Specification**” means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project.
- (9) “**Project Safety Specification**” means the document that contains Part 1 [*JSSS*] and Part 2 [*Particular Safety Specification*].
- (10) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (11) “**Safety Plan**” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in GC 4.1 [*Contractor’s General Obligations*] as supplemented by JSSS 1.7 [*Contractor’s Safety Plans*].

(12) “**Safety**” shall also mean “occupational health and safety” and “health and safety”.

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

- (1) “**Accident Response**” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [*Accident Response Plan*].
- (2) “**Confined Spaces**” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Cofferdam**” means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.
- (4) “**Dangerous Goods**” means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.
- (5) “**Dangerous Work**” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.
- (6) “**Diver**” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.

For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [*Diving Works*].

- (7) “**Earthwork Support**” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.
- (8) “**Elevated Access Structures**” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.
- (9) “**Emergency Response**” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.26 [*Emergency Response Plan*].
- (10) “**Falling Objects**” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.
- (11) “**Falsework**” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.
- (12) “**Formwork**” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.

- (13) “**Hazardous Substances**” means any substance, whether solid, liquid or gas, that may cause harm to health.
- (14) “**Hazardous Areas**” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts.
- (15) “**Hoisting Operation**” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.

For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [*Hoisting and Rigging*].

- (16) “**Operational Area**” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.
- (17) “**Personal Fall Arrest System**” or “**PFAS**” means a fall protection system that is designed to arrest a worker in a fall from a working level.
- (18) “**Personal Fall Restraint System**” or “**PFRS**” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.
- (19) “**Personal Protective Equipment**” or “**PPE**” means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.
- (20) “**Safety Belt**” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.
- (21) “**Safety Harness**” means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.
- (22) “**Scaffold**” or “**Scaffolding**” means a temporary structure or structures that provide access on or from which persons work or to support Goods.
- (23) “**Skill Training**” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [*Skill Training*]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.
- (24) “**Spotter**” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [*Spotters Flagmen and the Like*].

Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.

- (25) “**Trade Effluent**” means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.

- (26) “**Unexploded Ordnance**” or “**UXO**” shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.
- (27) “**Working Platform**” means a platform on or within a scaffold that is intended and designed to support persons or Goods.

A1.1.3. The following abbreviations of technical terms shall have the meanings stated:

AED	Automatic External Defibrillator
BMGV	Biological Monitoring Guidance Values
CPR	Cardiopulmonary Resuscitation
ODA	Official Development Aid
OJT	On Job Training
PFAS	Personal Fall Arrest System
PFRS	Personal Fall Restraint System
PPE	Personal Protective Equipment
TBM	Tool Box Meetings
TWA	Time Weighted Average
WEL	Workplace Exposure Limits

A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:

ACI	American Concrete Institute
ANSI	American National Standards Institute
ASHTO	American Association of State of Highway Transportation Officials
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials.
BS	British Standard
BS EN	British Standard European Norm
HSE	UK Health and Safety Executive
ISO	International Organisation for Standardisation
ILO	International Labor Organization
JIS	Japanese Industrial Standards

Annex 1.2: Content of Bid Stage Safety Plan

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [*Contractor's Safety Plan*]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder's intentions, so that this can be understood and properly evaluated.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic **company policies on risk assessment** and health and safety management.

(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.

A description of the responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams.

(4) Health and Safety Laws

A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.

(5) Bidder's Safety Management System

Refer to JSSS 1.5 [*Contractor's Safety Management System*]

Describe the scheme that the Bidder is proposing and how he intends to implement same.

(6) Temporary Works

Refer to JSSS 1.37 [*Design and Management of Temporary Works*].

A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.

(7) Temporary Facilities on Site

The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.).

(8) Safety Measures for Contractor's Design of the Permanent Works

If, under GC 4.1 [*Contractor's General Obligations*], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.

(9) Safety Plan for the Works

A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.

(10) Safety Plan for Dangerous Work.

Refer to JSSS 1.22 [*Dangerous Work*]

A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [*Definitions and Abbreviations*] and GC 4.1 [*Contractor's General Obligations*].

(11) Permit to Work System

Refer to JSSS 1.23 [*Permit to Work System*]

A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.

(12) Safety Measures for Contractor's Equipment

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.

(13) Proposed Health and Safety Incentive Scheme

Refer to JSSS 1.34 [*Health and Safety Incentive Schemes*]

A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.

(14) Safety Information Sharing and Communications Policy

A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.

A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.

(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)

Refer to JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*]

A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.

(16) Site Inspection Plan

A description of the methods for Site inspections by the HSO, types of inspection and frequency.

The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions and stopping work.

(17) Site Security

A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.

The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.

(18) Policy for Preventing Traffic Accidents

A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.

A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.

(19) Reporting Procedure for Unsafe Conditions and Behaviour

A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.

(20) Accident Response Plan

Refer to JSSS 1.23.1 [*Accident Response Plan*]

The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.

(21) Health Care Plan

Refer to JSSS 1.36 [*Health Matters*]

A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc..

A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.

(22) Fire Response Plan

Refer to JSSS 2.8 [*Fire Prevention*]

Details of the fire prevention services to be provided at the Site.

The Fire Response Plan required by JSSS 2.8 [*Fire Prevention*].

(23) Emergency Response Plan

Refer to JSSS 1.26 [*Emergency Response Plan*]

Details of the Emergency Response Plan.

(24) Monitoring and Review of Health and Safety Management Activities

The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [*Contractor's Safety Management Activities*]).

(25) Safety Induction Training

Refer to JSSS 1.20 [*Safety Induction Training*]

An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.

Details of special training required for Dangerous Works shall also be included.

(26) Skill Training

Refer to JSSS 1.21 [*Skill Training*]

An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.

(27) Legal Requirements

A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.

Annex 1.3: Additional Contractor Forms

Attached Forms:

Form JSSS/BSD - Bidder's Safety Declaration

Form JSSS/SAR - Sample Accident Report

Form JSSS/BSD - Bidder's Safety Declaration

[This form is to be inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]

I, [insert name and position of authorised signatory], being duly authorised by [insert name of Bidder/members of joint venture (“JV”)] (hereinafter referred to as the “Bidder”) to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.

The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.

The Bidder hereby declares that after full investigation and research of resources within the Country, he has given full and careful consideration and fully accepts the need and has made full allowance for the importation, the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, Temporary Works, PPE and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.

The Bidder declares that he will mobilise for use upon the Works:

1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and
2. New or up to date Contractor's Equipment and Temporary Works, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works;

and that all of the above will be used correctly and for the purpose intended.

The Bidder further declares that he shall:

1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks.
2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability.
3. Fully inform workers about hazards.
4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand.
5. Keep accurate records of work-related injuries and illnesses.
6. Perform tests in the workplace, such as air sampling as required by the Project Safety Specification.
7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged.
8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned.

9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract.
10. Post injury and illness information and data where workers can see them.
11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately.
12. Not retaliate against workers for using their rights under the Laws of the Country.

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed:

(Bidder's Official Representative)

Name:

Date: _____

Signed:

(Bidder's Proposed Health and Safety Officer at Site*)

Or

Bidder's Head Office Health and Safety Manager*)

Name:

Date: _____

(*Delete as applicable)

Form JSSS/SAR – Sample Accident Report

[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality) (If casualty(ies) is(are) belonging to subcontractor,) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	
8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	

(above to be inserted before all reports)

FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location of accident occurrence:	
4) Brief background and apparent cause:	
5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
6) Physical damages to the Works, Site and any properties of the third parties	
7) Present medical status of casualty(ies):	
8) Present work status:	
9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
10) Accident Report Submission Date	

SUBSEQUENT REPORT INFORMATION (POST-INVESTIGATION):	
1) Cause(s) of the accident:	
2) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:	
3) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
4) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
5) Other Information:	

Report Prepared by: (name): _____ (sign) : _____ Report Submission Date(s) _____ Time: _____	Contractor's Health and Safety Officer (HSO)
Receipt acknowledged by: (name): _____ (sign): _____ Report Receipt Date(s) _____ Time: _____	Engineer

(above to be inserted with detail and signatures at end of each report)

JICA Standard Safety Specification Preparation Study9
英文作成経緯表 1. General Requirements (Issue 9 DFR)

2020.7.6 DFR

NK Issue 7 submitted to JICA on 2020.3.27	JICA Comments on Issue 7 given on 2020.4.22 NK Actions transferred to MD for issue 8 on 2020.5.6	NK Issue 8 of 2020.5.15 NK 注記: 本 Issue 8 に最終変更を行い、Issue 9 を DFR として作成しました。
① NK to JICA	② NK to MD	③ MD to NK
<p>Yellow marking and red letters : Comments by NK (20200319) & (20200327) Green – subsequent changes made by DCI, <i>Replied to NK inquiry and added DCI notes</i> (20200325)</p>	<p>NK5/6 Actions to JICA Comments(20200506) JICA Comment and Revision (20200422) Yellow marking and red letters : Comments by NK (20200319) (20200327) Green – subsequent changes made by DCI, <i>Replied to NK inquiry and added DCI notes</i> (20200325)</p>	<p>赤字 Issue 7 からの変更 <i>2000514 Comment on JICA and NK revision by MD</i></p>
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	<p>Copy of Mail from Mr. Ito, JICA on 2020/4/23 Regarding Chapter 1, we have sometimes modified directly the text, and sometimes put comments. After several times of exchange between us, please be informed of the followings:</p> <p>1) As for the modifications of text with a comment highlighted in light blue, you don't have to examine the contents any more. You are requested only to check the quality of language.</p> <p>2) As for the modifications of text without any comment, same. You are requested only to check the quality of language.</p> <p>3) The modifications of text with a comment highlighted in green are sometimes questions and sometimes requests for advice. So, would you please come up with an appropriate solution?</p>	<p><i>DCI Notes:</i></p> <p><i>We have provided comment where necessary or where requested by NK/JICA.</i></p> <p><i>Our comment is not required by JICA on "blue" shaded items, therefore none is generally provided. This does not mean that we have no comment to make or that we recommend the changes are supportable or correct, which they are often not.</i></p> <p><i>In some instances, we have prepared further notes for NK information so that NK are aware of the further reasons for our concerns.</i></p> <p><i>We have also noticed that some original text may have been changed without any clear identification. Please note that we may not have not made comment on these items. We have also not reviewed the text word-for-word to identify all such changes.</i></p> <p><i>Due to the complicated nature of this document, it is difficult for us to properly edit punctuation, numbering and cross references, which is better achieved on a clean copy. We have tried to do this but assume that we will recheck this again later.</i></p> <p><i>Clause numbering has been reformatted throughout and page numbering adjusted.</i></p> <p><i>We have not issued a clean copy as obviously the notes are important for now but when answers can be provided to the further notes and queries herein, we will be pleased to update and prepare a clean coordinated copy.</i></p> <p><i>Due to clause numbering and heading changes, it will be necessary to update all other cross references in other Chapters where they relate to this Chapter 1, we do this when a clean copy of all is available.</i></p>
<p style="text-align: center;">ACKNOWLEDGEMENTS</p> <p><i>JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:</i></p> <p>1) Japanese Acts, Orders and Ordinances including:</p> <ol style="list-style-type: none"> (1) Industrial Safety and Health Act (2) Order for Enforcement of Industrial Safety and Health Act (3) Ordinance on Industrial Safety and Health (4) Safety Ordinance for Cranes (5) Ordinance on Safety and Health of Work under High Pressure (6) Ordinance on Prevention of Anoxia, etc. (7) Ordinance on Prevention of Hazards Due to Dust (8) Explosives Control Act (9) Order for Enforcement of Explosives Control Act (10) Ordinance on Explosives Control <p>2) OSHA Standard Part 1926 Safety and Health Regulations for Construction", as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.</p>	<p style="text-align: center;">ACKNOWLEDGEMENTS</p> <p><i>JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:</i></p> <p>1) Japanese Acts, Orders and Ordinances including:</p> <ol style="list-style-type: none"> (1) Industrial Safety and Health Act (2) Order for Enforcement of Industrial Safety and Health Act (3) Ordinance on Industrial Safety and Health (4) Safety Ordinance for Cranes (5) Ordinance on Safety and Health of Work under High Pressure (6) Ordinance on Prevention of Anoxia, etc. (7) Ordinance on Prevention of Hazards Due to Dust (8) Explosives Control Act (9) Order for Enforcement of Explosives Control Act (10) Ordinance on Explosives Control <p>2) OSHA Standard Part 1926 Safety and Health Regulations for Construction", as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor.</p>	<p style="text-align: center;">ACKNOWLEDGEMENTS</p> <p><i>I had suggested that copyright and disclaimer clauses would appear to be necessary for JSSS and had further requested that these suggestions be reviewed by JICA legal sources and that confirmation or comment with any revised text be obtained and provided. To date please note that this has not been received, the following remain therefore as food faith suggestions.</i></p> <p><i>JICA have referred to other publications during the preparation of this document and parts of such other publications have been used in the preparation hereof. JICA acknowledges and gives credit to these sources/publications which include:</i></p> <p>1) Japanese Acts, Orders and Ordinances including:</p> <ol style="list-style-type: none"> (1) Industrial Safety and Health Act (2) Order for Enforcement of Industrial Safety and Health Act (3) Ordinance on Industrial Safety and Health (4) Safety Ordinance for Cranes (5) Ordinance on Safety and Health of Work under High Pressure (6) Ordinance on Prevention of Anoxia, etc. (7) Ordinance on Prevention of Hazards Due to Dust (8) Explosives Control Act (9) Order for Enforcement of Explosives Control Act (10) Ordinance on Explosives Control <p>2) OSHA Standard Part 1926 Safety and Health Regulations for Construction", as written in Code of Federal Regulation (29 CFR) and published by the Occupational Safety and Health Administration, U.S.</p>

<p>3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.</p> <p>4) The International Red Cross and Red Crescent Movement (IRCRCM)</p> <p>NK: In 2.9.2 First aid kit: ANSI Z308.1 is referred to. Is the above 4) necessary?</p> <p>True: ANSI is the kit but first aid courses will also be necessary (see added clauses in Section 2.9 and Chapter 10 also). ICRRCM seems to be a convenient and internationally applicable basis.</p> <p>5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)</p> <p>Suggestion for JICA:</p> <p>COPYRIGHT</p> <p>Users of this document are free to copy, publish, distribute, transmit and adapt the information herein, on the condition that they acknowledge JICA as the source of the information and include a link to the JICA website.</p> <p>DISCLAIMER</p> <p>JICA has prepared and issued this document in good faith for the reference of executing agencies, contractors and project teams engaged under the Japanese ODA programme, to encourage the attainment of a higher standard of health and safety management on its construction projects. 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This document is intended to provide general reference and shall not be relied upon as a specific legal source or reference or used in any way as a basis of any claim by a contractor against any employer or vice versa under any contract for the execution of any works.</p>	<p>3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.</p> <p>4) The International Red Cross and Red Crescent Movement (IRCRCM)</p> <p>5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)</p> <p>COPYRIGHT</p> <p>Users of this document are free to copy, publish, distribute, transmit and adapt the information herein, on the condition that they acknowledge JICA as the source of the information and include a link to the JICA website.</p> <p>DISCLAIMER</p> <p>JICA has prepared and issued this document in good faith for the reference of executing agencies, contractors and project teams engaged under the Japanese ODA programme, to encourage the attainment of a higher standard of health and safety management on its construction projects. 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This document is intended to provide general reference and shall not be relied upon as a specific legal source or reference or used in any way as a basis of any claim by a contractor against any employer or vice versa under any contract for the execution of any works.</p>	<p>Department of Labor.</p> <p>3) Construction (Design and Management) Regulations 2015, published by the UK Health and Safety Executive.</p> <p>4) The International Red Cross and Red Crescent Movement (IRCRCM)</p> <p>The above is not necessary; this page is for copyright rules and as we have not copied or used their script, it can be deleted.</p> <p>5) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer published by Fédération Internationale des Ingénieurs-Conseils (FIDIC)</p> <p>Previous Suggestion for JICA consideration:</p> <p>COPYRIGHT</p> <p>Users of this document are free to copy, publish, distribute, transmit and adapt the information herein, on the condition that they acknowledge JICA as the source of the information and include a link to the JICA website.</p> <p>DISCLAIMER</p> <p>JICA has prepared and issued this document in good faith for the reference of executing agencies, contractors and project teams engaged under the Japanese ODA programme, to encourage the attainment of a higher standard of health and safety management on its construction projects. 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<p>JICA STANDARD SAFETY SPECIFICATION (JSSS)</p> <p>1. GENERAL REQUIREMENTS</p> <p>1.1 Safety Declaration</p> <p>1.1.1 Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.</p> <p>1.1.2 A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.</p> <p>NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance 1.3 and modify the 1.1.2 as follows: 1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Declaration.</p> <p>This is specifically a Bid form to be submitted with the Bid and the wording is correct. Actually, this does require a change to the JICA Standard Bidding Document as included in our earlier draft but JICA do not want to do this.</p>	<p>JICA STANDARD SAFETY SPECIFICATION (JSSS)</p> <p>1. GENERAL REQUIREMENTS</p> <p>1.1 Safety Declaration</p> <p>1.1.1 Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.</p> <p>1.1.2</p> <p>1.1.3 A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.</p> <p>NK: NK inquired JICA whether it is not problem to include the form of Safety Declaration in the User Guide because the SBD does not allow addition.</p> <p>NK5/6YH: JICA did not response to the above inquiry. We will proceed as MD proposed.</p>	<p>JICA STANDARD SAFETY SPECIFICATION (JSSS)</p> <p>1. CHAPTER 1: GENERAL REQUIREMENTS</p> <p>1.1 Safety Declaration</p> <p>1.1.1 Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.</p> <p>1.1.2 A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.</p>

I have modified the User Guide to state this but the same problem will arise, the User Guide requires the Executing Agency to change the Bidding Documents but the SBD prevent this.

If JICA do not change the SBD this will continue to be a problem and for now all else must therefore be an unsatisfactory compromise.

NK: MD 氏は上記のようにSBD の様式の追加は認められていないが、User Guide に含めました。請負者の安全宣言の様式をUser Guide に含めることは、SBD の規定上、問題ないでしょうか？

1.2 General Reference Notes

1.2.1 For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].

1.2.2 The following further general reference notes apply to the content of JSSS:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
- (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an **equivalent alternative** diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.
- (6) Any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer’s Personnel and all other persons that are entitled to be on the **Site**.

NK: There are many descriptions of “other the Site areas (if any) where the Works are being executed” in JSSS. GC defines as I.1.6.7 “Site” means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.(NK のコメントにより、すでに削除済ですが、Q&A は残しました。)

May we know the following?

Q1: Which places you are assuming as other places?

Q2: Are other places specified in the Particular Safety Specification?

1.2 General Reference Notes

1.2.1 For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].

1.2.2 The following further general reference notes apply to the content of JSSS:

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- (6) Unless otherwise stated in JSSS or the context is otherwise clear, (JC1) any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer’s Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.(JC2)

JC1: In this chapter 1, the expression “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site” which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better:

1. With this additional wording, simply say “the Contractor’s Personnel” or
2. Without this additional wording, every time repeat “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works”

NK/6YH: NK would like to select the 1 above for JSSS:

1.2 General Reference Notes

1.2.1 For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].

1.2.2 The following further general reference notes apply to the content of JSSS:

- (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed.
- (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data.
- (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible.
- (4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.
- (5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an equivalent alternative diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.
- (6) Unless otherwise stated in JSSS or the context is otherwise clear, (JC1) any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer’s Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.(JC2)

NK/6YH: NK would like to ask MD to review and select proper wording for JSSS:

This clause is intended only to ensure that the Employer’s Personnel and any other persons who are entitled to be on the Site are automatically provided with the same health and safety measures that are provided to the Contractor’s Personnel, whenever there is a mention of “Contractor’s Personnel”.

Thereafter there should be no other reference to “Employer’s Personnel and any other persons who are entitled to be on the Site” unless it is for reasons other than the provision of health and safety requirements. I have reviewed other clauses and deleted some, where this is necessary.

Other places may be specified in the Contract as forming part of the Site such as offsite storage areas provided by the Employer or Employer's and Engineer's compounds and facilities all of which may be remote from the Site but for which the Contractor still has the usual obligations such as care, insurance, maintenance, etc. This is obviously creating difficulty with interpretation, so I have deleted all such reference in JSSS and it now it constantly refers to the Site only. This will also be considered for mention in the User Guide.

- (7) Any reference in JSSS to "relevant authority" or "relevant authorities" shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.
- (8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.
- (9) Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

1.3.1 JSSS shall form a part of the Project Safety Specification which in turn forms a part of the Specification as illustrated in Annex 1.4: [Figures and Illustrations], Fig A1.4.1 [Incorporation of JSSS in Bid and Contract Documents] and as follows:

- (1) JSSS shall be included as a part of the Specification for the Works, which shall be subdivided into two parts namely:
- (a) The Project Safety Specification (including JSSS), and
 - (b) The Technical Specification

1.3.2 The priorities of the document comprising the Specification are as follows:

- (1) Within the "Project Safety Specification" the Particular Safety Specification shall have priority over JSSS,
- (2) The "Project Safety Specification" shall have priority over the

JC2: Safety measures are needed not only in the Site. We would like to have advice of NK/MD. The current draft JSSS says:
 A: the Site (very often) and
 B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)
 Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above.
 Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:
 "Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works".
 Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.
 Otherwise, we may repeat "the Site and other places (if any) where the Contractor intends to execute the Works" every time. But this is too long, so a bit awkward.
 How do you think?

NK5/6YH: NK would like to ask MD to review and select proper wording for JSSS:

- (7) Any reference in JSSS to "relevant authority" or "relevant authorities" shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.
- (8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.
- (9) Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

1.3.1 JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The "Project Safety Specification" shall have priority over the other parts of Specification in respect of health and safety matters. Within the "Project Safety Specification" the Particular Safety Specification shall have priority over JSSS. (JC3)

JC3: Better to avoid using "Technical specification" Fig A1.4.1 moved to User Guide.

NK5/6: No comment to JC because JICA want to modify as they commented.

1.3.2 The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.

I recommend that the following is necessary (JC4)

NK: : MD proposed the addition above. NK considers it is not necessary.

JC4: Not necessary.

NK5/6: Deleted as commented.

For the purpose of this reference only it is not necessary to add any additional wording to "Site".

I suggest the clause can then be as now suggested by JICA or even left simply as it was.

- (7) Any reference in JSSS to "relevant authority" or "relevant authorities" shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.
- (8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.
- (9) Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.

1.3 Incorporation of JSSS into the Contract

1.3.1 JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The "Project Safety Specification" shall have priority over the other parts of the Specification in respect of health and safety matters. Within the "Project Safety Specification" the Particular Safety Specification shall have priority over JSSS. (JC3)

Suggested editing

1.3.2 The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.

I recommend that the following is necessary (JC4)

NK: : MD proposed the addition above. NK considers it is not necessary.

JC4: Not necessary.

NK5/6: Deleted as commented.

<p>Technical Specification in respect of health and safety matters.</p> <p>NK: Q1: We think it needs to explain/define “Technical Specification” as same as User Guide 1.3.2 (3) The “Technical Specification” shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safety.</p> <p><i>Yes I agree but the problem again is that “Specification” is already defined in the General Conditions of Contract and any change should be therefore be through a Particular Conditions change but JICA do not want this.</i></p> <p><i>I have added the explanation as above but please note that this is a compromise.</i></p> <p>Q2: Is “other parts of” necessary?</p> <p><i>Thank you and no, it isn't, see above. (すでに削除済みです。)</i></p> <p>1.3.3 The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.</p> <p><i>I recommend that the following is necessary</i></p> <p><i>The User Guide shall not form a part of the Contract.</i></p> <p>NK: : MD 氏は上の追記を提案していますが、入札図書として出てこないなので不要と考えます。</p> <p>1.4 Compliance with JSSS and Other Regulations</p> <p>1.4.1 JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.</p> <p>1.4.2 JSSS shall not limit the Contractor’s statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.</p> <p>1.4.3 The Contractor shall comply fully with the requirements of JSSS as supplemented and modified by the Particular Safety Specification.</p> <p>1.4.4 Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer’s Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract.</p> <p>1.4.5 Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply.</p> <p>NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?</p> <p><i>It is intended to be for the situation where JSSS has been agreed to be use, but it is lacking in some areas in which case we use the Laws.</i></p> <p>1.4.6 If there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer’s consent.</p> <p>NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?</p> <p><i>It is intended for use where we have dropped back to the Laws but there are no particular Laws available.</i></p> <p><i>I have no objection if both are deleted.</i></p> <p>NK: 1.4.5 と 1.4.6 を合わせた次のような規定ではいかがかと考えます。</p> <p><i>If there are no or insufficient safety provisions in the Laws of the Country and in JSSS and the Particular Safety Specification for the particular part of the Works,</i></p>	<p>1.4 Compliance with JSSS and Other Regulations</p> <p>1.4.1 JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.</p> <p>1.4.2 JSSS shall not limit the Contractor’s statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.</p> <p>1.4.3 The Contractor shall comply fully with the requirements of Project Safety Specification.</p> <p>1.4.1. Deleted (JC5)</p> <p>JC5: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.</p> <p>NK5/6: Will modify as commented.</p> <p>1.4.2. Deleted.(JC6)</p> <p>JC6: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6.</p> <p>NK5/6: Will delete as commented.</p> <p>1.4.4 If, <u>for the particular part of the Works, the Project Safety Specification does not contain safety requirements and</u> there are no safety regulations contained in the Laws of the Country, the Contractor shall propose suitable <u>safety measures in the Safety Plans</u> for the Engineer’s consent. <u>These may contain proposing application of internationally recognised standard or regulation.</u></p>	<p><i>Notes to NK: the statement that the User Guide does not form a part of the Contract is important and intended to limit risk for JICA.</i></p> <p><i>The deletion is shaded in blue so I must not comment.</i></p> <p><i>The biggest user of JSSS is actually the Contractor, and if it is published at the same time as the User Guide on the same JICA website the contractor will refer to it and this could create future problems.</i></p> <p><i>Future claims from contractors can be predicted on this for example that the Bid documents have not been prepared properly according to the User Guide or that the full information (for example required by User Guide clause 1.3.3) has been not been provided or has been withheld. Whether such claims are insupportable under the contract or not, they must still be defended and this takes time and money usually which JICA pay.</i></p> <p><i>JSSS 1.3.4 was intended to very simply prevent this but it has been deleted and I have been asked not to comment, so what can I do?</i></p> <p><i>After further consideration on this subject and as advised in my last comment of Annex 1, I also suggest that it is better to rename the “User Guide”, for example as the “Guide for Use of Executing Agencies”, it is more correct and may reduce the risk of claim even though it will not solve this problem fully.</i></p> <p>1.4 Compliance with JSSS and Other Regulations</p> <p>1.4.1 JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.</p> <p>1.4.2 JSSS shall not limit the Contractor’s statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.</p> <p>1.4.3 The Contractor shall comply fully with the requirements of Project Safety Specification</p> <p>1.4.4 <u>If, for the particular parts of the Works, the Project Safety Specification does not contain safety requirements and</u> there are no safety regulations contained in the Laws of the Country, the Contractor shall propose suitable <u>safety measures in the Safety Plans</u> for the Engineer’s consent. <u>These may contain proposing application of internationally recognised standard or regulation.</u></p> <p><i>consent.</i></p>
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<p><i>and if the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent. (subject to MD's review.)</i></p> <p>1.4.7 Specified Standards and Regulations:</p> <p>(1) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.</p>	<p>1.4.5 Specified Standards and Regulations(JC7)</p> <p>JC7: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.</p> <p>NK5/6: YH think these regulations do not include the law. To MD, please review this comment and sentences.</p> <p>(1) <u>Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date.</u> (JC8)</p> <p>JC8: Better to add this in the main text of JSSS as mentioned in A1.1.5 ?</p> <p>NK5/6: YH think these regulations do not include the law. We would like to ask MD to review this.</p> <p>(2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.</p> <p>(3) <u>Application of detailed parts of standard or regulation specified in JSSS may be waived at a formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.</u> (JC9)</p> <p>JC9: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of "waiver" should be provided.</p>	<p>1.4.5 Specified Standards and Regulations(JC7)</p> <p>NK5/6: YH think these regulations do not include the law. To MD, please review this comment and sentences.</p> <p><i>For example, OSHA requirements to which you have referred in JSSS, are actually their regulations not standards.</i></p> <p><i>These regulations are intended for the US and are enforceable only there under their rule of law.</i></p> <p><i>Using OSHA does not mean or imply that you are adopting related US laws or rules for enforcement.</i></p> <p><i>To avoid any legal association, please refer to subclause (4) below and also throughout the other "technical" chapters of JSSS where reference is made to OSHA by using the phrase to the "technical requirements of"</i></p> <p><i>This is very much a compromise but something like this is necessary to support your choice of OSHA as a reference basis.</i></p> <p><i>My own opinion is that OSHA will not form a part of the applicable Laws or the Laws of the Country with which the Contractor is to comply under the Contract (see GC 1.13 and 13.7 respectively), however I recommend that JICA should check this opinion to support their choice of OSHA, HSE etc.</i></p> <p><i>Please advise of any further requirements or if you require any change.</i></p> <p>(1) <u>Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date.</u> (JC8)</p> <p>NK5/6: YH think these regulations do not include the law. We would like to ask MD to review this.</p> <p><i>There appears to be no problem with transferring the above clause to here but it needs deleting in the Annex to avoid duplication.</i></p> <p>(2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.</p> <p>(3) <u>Application of detailed parts of any standards or regulations specified in JSSS may be waived at the formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.</u> (JC9)</p> <p>JC9: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As</p>
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<p>1.4.8 Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.</p> <p>1.4.9 Where there is any reference to OSHA and unless otherwise evident from the text, the words “team leader”, “on-site supervisor”, “on-site supervision”, “field superintendent”, “work chief” and the like shall be collectively construed as reference to the appropriate member of the Contractor’s Personnel, any reference to the “safety and health manager of the Contractor” and the like shall be construed as reference to the HSO and “The construction plan and safety and health plan”, shall be construed as the “Safety Plan”.</p> <p>1.4.10 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:</p> <p>(1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.</p> <p>(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear.</p> <p>1.4.11 Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion, during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification.</p> <p>NK: We consider that this phrase may be changed to “and the Defects Notification Period”? (Though the phrase is correctly expressed.)</p> <p>No, your suggested change would not be correct this has been especially drafted following JICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all</p>	<p>NK5/6: Will modify as commented.</p> <p>(3)(4) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.</p> <p>1.4.6 Where there is any reference to OSHA and unless otherwise evident from the text, the words “team leader”, “on-site supervisor”, “on-site supervision”, “field superintendent”, “work chief” and the like shall be collectively construed as reference to the appropriate member of the Contractor’s Personnel, any reference to the “safety and health manager of the Contractor” and the like shall be construed as reference to the HSO and “The construction plan and safety and health plan”, shall be construed as the “Safety Plan”.</p> <p>1.4.7 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:</p> <p>(3) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.</p> <p>(4) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear. (JC10)</p> <p>JC10: We don’t really understand the meaning of this.</p> <p>NK5/6: YH considers this cannot be understood. To MD, please review this sentence..</p> <p>1.4.8 Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion <u>and Defect Notification Period.</u> (JC11)</p> <p>JC11: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP. With this modification, Particular Safety Specification in User Guide will not be necessary any more.</p> <p>NK5/6: Will modify as commented.</p>	<p>discussed at the last meeting with MD, we believe that this kind of “waiver” should be provided.</p> <p>NK5/6: Will modify as commented.</p> <p>Please refer to editing as shown in red.</p> <p>(3)(4) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.</p> <p>1.4.6 Where there is any reference to OSHA and unless otherwise evident from the text, the words “team leader”, “on-site supervisor”, “on-site supervision”, “field superintendent”, “work chief” and the like shall be collectively construed as reference to the appropriate member of the Contractor’s Personnel, any reference to the “safety and health manager of the Contractor” and the like shall be construed as reference to the HSO and “The construction plan and safety and health plan”, shall be construed as the “Safety Plan”.</p> <p>1.4.7 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:</p> <p>(1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.</p> <p>(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear. (JC10)</p> <p>NK5/6: YH considers this cannot be understood. To MD, please review this sentence..</p> <p>Please clarify the meaning your query as I cannot clearly understand.</p> <p>Similar to GC 1.5, the documents in JSSS are basically to be taken as mutually explanatory of one another however the priority of the documents should be stated, in order to resolve any future ambiguity or discrepancy. For this reason, I have suggested that for any interpretation difficulty:</p> <p>between Chapter 1 (which is General) and all other chapters, then Chapter 1 will prevail and apply</p> <p>between Chapters 2 to 6 (which are also general) and all others (Chapters 7 to 10 and future), Chapters 2 to 6 will apply</p> <p>Please advise of any change that you require.</p> <p>1.4.8 Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion <u>and Defects Notification Period.</u> (JC11)</p> <p>NK5/6: Will modify as commented.</p> <p>am a little confused as NK are requested to redraft.</p> <p>Notes for NK:</p> <p>The following information is given for NK use.</p>
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<p>responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).</p> <p>The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer's property except as stated in this clause.</p> <p>NK: we agree to leave this as specified.</p> <p>1.4.12 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.</p> <p>1.5 Contractor's Safety Management System</p> <p>1.5.1 The Contractor shall institute a health and safety management system in accordance with OHSAS 18001 or ISO 45001:2018.</p> <p>1.5.2 The Contractor shall state the applicable standard in the Contractor's Safety Plan.</p> <p>1.5.3 The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.</p> <p>NK: JICA deleted 1.5.3 in the last comment because JICA wants for the Contractor to institute and operate HS management system but not request submission of certification. (actually and practically certificate is not much important). We think 1.5.3 should be deleted.</p> <p>I have deleted the requirement with the Bid (see Annex 1.3), however if the contractor is to comply with a scheme how does the Engineer know which scheme and how to verify compliance?</p>	<p>1.4.9 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.</p> <p>1.5 Contractor's Safety Management System</p> <p>1.5.1 The Contractor shall institute a health and safety management system in accordance with ISO 45001. (JC11a) <u>The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.</u></p> <p>JC11a: OHSAS does not exist any more?? Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.</p> <p>NK5/6: OHSAS18001 will be expired on March 11, 2012. To MD, do we make note till the expiry date? NK agreed to delete the year.</p> <p>1.5.2 Deleted. (JC12) JC12: If delete OHSAS above, delete accordingly.</p> <p>NK5/6: To MD, please review this.</p> <p>1.5.3 <u>Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17. (JC13)</u></p> <p>JC13: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.</p> <p>1.5.4 <u>The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.</u></p> <p>NK5/6: Will modify as commented.</p>	<p>I completely understood the JICA intentions during the earlier discussion in January which is why the above advice (highlighted in green) was given.</p> <p>The Contractor must have already completed the Works before commencement of the DNP and they have already been taken over, occupied and put into use by the Employer.</p> <p>The Contractor of course has a contractual obligation to take care of the health and safety of his employees when they are completing any work which is outstanding or executing any work required to remedy defects during the DNP and it is not necessary to state this in JSSS.</p> <p>However, the Contractor has no obligation to continue to provide the majority of the facilities or services of JSSS during the DNP as the Works are completed, handed over, occupied and used by the Employer and most if not all temporary facilities will already have been removed.</p> <p>To state that "the Contractor shall comply with the requirements of JSSS throughout the DNP" is not correct.</p> <p>The Contractor for example has no obligation to provide ongoing services and facilities during the DNP, meaning no clinic, ambulance, medical facilities, fire-fighting, support to Employer and Engineer, spare PPE, training, scaffolding, contractor's equipment and temporary works general availability etc etc, all of which are "requirements" of JSSS.</p> <p>I am concerned that this will be misunderstood or even abused by some employers and consultants and that because this is so stated the contractor will be requested to provide services and facilities that he is no longer responsible for.</p> <p>If any facilities are particularly required (e.g. clinic, ambulance, medical facilities, fire-fighting, spare PPE, training etc this should be clearly stated in the Particular Safety Specification so that the Contractor is aware and so that it can be included in his bid.</p> <p>The added text is not therefore advisable.</p> <p>1.4.9 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.</p> <p>1.5 Contractor's Safety Management System</p> <p>1.5.1 The Contractor shall institute a health and safety management system in accordance with ISO 45001. (JC11a) <u>The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.</u></p> <p>NK5/6: OHSAS18001 will be expired on March 11, 2012. To MD, do we make note till the expiry date? NK agreed to delete the year.</p> <p>1.5.2 <u>Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17. (JC13)</u></p> <p>1.5.3 <u>The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.</u></p> <p>NK, please can you advise me of the text that you want to insert here and I will edit this as necessary.</p>
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<p><i>It has no little or no meaning otherwise.</i></p> <p>NK: JICA intention is only to apply the safety management system excluding the certification and auditing by the certification body. Therefore, 1.5.3 is considered not request certification. この考え方で正しいでしょうか？</p> <p>1.6 Checking and Validation of Submissions</p> <p>1.6.1 In accordance with GC 4.9 [<i>Quality Assurance</i>] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor’s responsible personnel, including for example the Contractor’s Representative, HSO, Temporary Works coordination, design and supervision staff and any independent checkers as appropriate.</p> <p>NK: Is this correct that we think 1.6.1 is added in relation with design of TW, etc.? <i>Not only TW it also applies to his Safety Plans, Method statements, any shop or working drawings. In fact any Contractor submissions are stated.</i></p> <p>1.6.2 For the purposes of interpretation for JSSS, the final paragraph of GC 1.8 [<i>Care and Supply of Documents</i>] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible.</p> <p>NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.</p> <p><i>This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. I believe that with the increased amount of submissions such as method statements, safety plans and temporary works details, there is an increased possibility that the Engineer could comment but chooses not to or even overlooks or misses, errors. If this happens there is the risk of avoiding responsibility if an error or defect (what is this?) should have been discovered.</i></p> <p><i>It is a strange but potentially onerous obligation that is inconsistent with GC 4.9 even if 1.8 does not state the consequences: GC 1.8 states: “If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.”</i></p> <p>NK: 貴機構のご意見はいかがでしょうか？</p> <p>1.7 Contractor’s Safety Plans</p> <p>1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor’s proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:</p> <p>(1) that are stated in JSSS;</p> <p>(2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and</p>	<p>1.6 Checking and Validation of Submissions</p> <p>1.6.1 In accordance with GC 4.9 [<i>Quality Assurance</i>] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor’s responsible personnel, including for example the Contractor’s Representative, HSO, Temporary Works coordination (JC13a), design and supervision staff and any independent checkers as appropriate.</p> <p>JC13a: coordinator?</p> <p>NK5/6: We think so.</p> <p>(JC14)NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.</p> <p><i>This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. I believe that with the increased amount of submissions such as method statements, safety plans and temporary works details, there is an increased possibility that the Engineer could comment but chooses not to or even overlooks or misses, errors. If this happens there is the risk of avoiding responsibility if an error or defect (what is this?) should have been discovered. (JC14)</i></p> <p><i>It is a strange but potentially onerous obligation that is inconsistent with GC 4.9 even if 1.8 does not state the consequences: GC 1.8 states: “If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.”</i></p> <p>JC14: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1). Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of “double checker” to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor. We think we should not excessively stick to the question of “from whom to whom the responsibility may be transferred”.</p> <p>NK5/6: Will modify as commented.</p> <p>1.7 Contractor’s Safety Plans</p> <p>1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor’s proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:</p> <p>(1) that are stated in JSSS;</p> <p>(2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and</p>	<p>1.6 Checking and Validation of Submissions</p> <p>1.6.1 In accordance with GC 4.9 [<i>Quality Assurance</i>] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor’s responsible personnel, including for example the Contractor’s Representative, HSO, Temporary Works coordination (JC13a), design and supervision staff and any independent checkers as appropriate.</p> <p>NK5/6: We think so.</p> <p>NK5/6: Will modify as commented.</p> <p><i>NK, please can you advise me of the text that you want to insert here and I will edit the spelling grammar of this as necessary.</i></p> <p>1.7 Contractor’s Safety Plans</p> <p>1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor’s proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:</p> <p>(1) that are stated in JSSS;</p>
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<p>(3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on <u>the Site</u>.</p> <p>1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:</p> <ol style="list-style-type: none"> (1) Bid Stage Safety Plan (Outline Overall Safety Plan). (2) Commencement Stage Safety Plan (Updated Overall Safety Plan) (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works) <p>NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.</p> <p>I don't quite understand your comment, the Bid Stage Plan is followed by an updated plan after Commencement but this is still an early plan and the same plan (or parts of it) will probably require to be further revised and updated as the detail of works develop and before any parts of the works commence.</p> <p>NK: We understand your meaning.</p> <p>1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level. throughout the Time for Completion of the Works.</p> <p>1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility. and at any time throughout the Time for Completion of the Works.</p> <p>NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?</p> <p>Yes thank you, that is true, but better to delete the phrase rather than add.</p> <p>1.7.6 Bid Stage Safety Plan:</p> <ol style="list-style-type: none"> (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [Content of Bid Stage Safety Plan]. (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated. <p>1.7.7 Commencement Stage Safety Plan</p> <ol style="list-style-type: none"> (1) This shall be submitted within twenty-eight (28) days <u>after</u> the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site, 	<p>(3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site. (JC15)</p> <p>JC15: See 1.2.2 (6). NK5/6: No comment.</p> <p>1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:</p> <ol style="list-style-type: none"> (1) Bid Stage Safety Plan (Outline Overall Safety Plan). (2) Commencement Stage Safety Plan (Updated <u>Bid Stage</u> Safety Plan) (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works) <p>1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level.-</p> <p>1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility.</p> <p>1.7.6 Bid Stage Safety Plan:</p> <ol style="list-style-type: none"> (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [<i>Content of Bid Stage Safety Plan</i>]. (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated. <p>1.7.7 Commencement Stage Safety Plan</p> <ol style="list-style-type: none"> (1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site, 	<p>(2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and</p> <p>(3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, <u>Employer's Personnel and other persons entitled to be on the Site.</u> (JC15)</p> <p>NK5/6: No comment. <i>This is connected with the provision of health and safety measures as referred to in 1.2.2 (6) and can be deleted to be compatible.</i></p> <p>1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:</p> <ol style="list-style-type: none"> (1) Bid Stage Safety Plan (Outline Overall Safety Plan). (2) Commencement Stage Safety Plan (Updated <u>Bid Stage</u> Safety Plan) (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works) <p>1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level.</p> <p>1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility.</p> <p>1.7.6 Bid Stage Safety Plan:</p> <ol style="list-style-type: none"> (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [<i>Content of Bid Stage Safety Plan</i>]. (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated. <p>1.7.7 Commencement Stage Safety Plan</p> <ol style="list-style-type: none"> (1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site,
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<p>(2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>(3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.</p> <p>NK: Is it not necessary to specify to review Commencement Stage SP? Can we consider Commencement Stage SP is not be reviewed and the Engineer may review it and give comment in accordance with GC 1.8 Care and Supply of Documents though Japanese draft is specified to review it within 14 days?</p> <p>Fair comment: I had modified the following clause 1.7.8 to deal with Particular Safety Plans. The Commencement Stage Safety plan is another contract stage submission subject to the same procedures so I have added it there.</p> <p>Please also note the above correction to the submission date of the plan which should be twenty-eight (28) days after the Commencement Date.</p> <p>1.7.8 Particular Safety Plans</p> <p>(1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.</p> <p>1.7.9 Procedures for Submission and Review</p> <p>(1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works.</p> <p>(2) The Contractor shall submit:</p> <p>(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].</p> <p>(b) The Particular Safety Plans within fourteen (14) days after the date of the Engineer's request.</p> <p>NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?</p> <p>I have changed this</p> <p>Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP. We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan</p> <p>I disagree; many of the items mentioned in Issue 6 are to be included in the Method statement and all other items are included in Annex 1.3 all of which will be progressively developed. There is no need to include additional information here.</p> <p>NK: understand.</p>	<p>(2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>(3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.</p> <p>1.7.8 Particular Safety Plans</p> <p>(1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.</p> <p>1.7.9 Procedures for Submission and Review</p> <p>(1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works. (JC16)</p> <p>JC16: Should it be "of the Works or any part thereof"?</p> <p>NK5/6: We agreed the above modification.</p> <p>(2) The Contractor shall submit:</p> <p>(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].</p> <p>(b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.</p>	<p>(2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>(3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.</p> <p>1.7.8 Particular Safety Plans</p> <p>(1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.</p> <p>1.7.9 Procedures for Submission and Review</p> <p>(1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works. (JC16)</p> <p>NK5/6: We agreed the above modification.</p> <p>Yes for consistency that is better but I suggest to further consistency please use: "the Works or any part of the Works."</p> <p>(2) The Contractor shall submit:</p> <p>(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].</p> <p>(b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.</p>
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<p>(3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:</p> <p>(a) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;</p> <p>(b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.</p> <p>1.7.10 The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p> <p>1.7.11 Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.</p> <p>1.7.12 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.</p> <p>1.8 Risk Assessment</p> <p>1.8.1 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.</p> <p>1.8.2 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.</p> <p>1.8.3 The procedural flow of risk assessment shall be as follows.</p> <p>(1) Identifying hazards.</p> <p>(2) Evaluating risks.</p> <p>(3) Determining measures of risk reduction or elimination.</p> <p>1.8.4 The procedural flow for risk reduction measures shall be as follows with</p>	<p>(3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:</p> <p>(a) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;</p> <p>(b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.</p> <p>1.7.10 The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p> <p>1.7.11 Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.</p> <p>1.7.12 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.</p> <p>1.8 Risk Assessment</p> <p>1.8.1 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.</p> <p>1.8.2 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.</p> <p>1.8.3 The procedural flow of risk assessment shall be as follows.</p> <p>(1) Identifying hazards.</p> <p>(2) Evaluating risks.</p> <p>(3) Determining measures of risk reduction or elimination.</p> <p>1.8.4 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:</p>	<p>(3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:</p> <p>(a) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;</p> <p>(b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.</p> <p>1.7.10 The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p> <p>1.7.11 Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.</p> <p>1.7.12 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.</p> <p>1.8 Risk Assessment</p> <p>1.8.1 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.</p> <p>1.8.2 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.</p> <p><i>This is not directly connected with the provision of health and safety measures as referred to in 1.2.2 (6), it is safety warning, I suggest that the full expression should remain.</i></p> <p>1.8.3 The procedural flow of risk assessment shall be as follows.</p> <p>(1) Identifying hazards.</p> <p>(2) Evaluating risks.</p> <p>(3) Determining measures of risk reduction or elimination.</p> <p>1.8.4 The procedural flow for risk reduction measures shall be as follows with</p>
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<p>earlier listed items having higher priority:</p> <ol style="list-style-type: none"> (1) Removal of hazards such as eliminating dangerous methods of construction. (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment. (3) Engineering measures. (4) Management measures including improving skills with additional training. (5) Use of PPE. <p>NK: May we know what "improved PPE" mean?</p> <p>Deleted</p> <p>1.9 Contractor's Method Statements</p> <p>1.9.1 The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.</p> <p>1.9.2 Method Statements shall include details of all Permanent Works and Temporary Works with supporting documents such as:</p> <p>(1) Studies, investigations and designs.</p> <p>NK: We suggest to change to "Studies, investigations, and designs"?</p> <p>Changed</p> <ol style="list-style-type: none"> (2) Structural calculations and any other calculations. (3) Specifications and technical details. (4) Proposed construction procedure, sequence and method. (5) Construction resources including superintendents, workers, operation leaders and Contractor's Equipment. <p>NK: We consider "worker" will be used because it is used in other Chapter though FIDIC uses "labour".</p> <p>Ok I have changed anyway but it now needs wider wording, labour is also used in FIDIC</p> <ol style="list-style-type: none"> (6) Inspection and monitoring plan. <p>1.9.3 The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.</p> <p>1.9.4 Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:</p> <ol style="list-style-type: none"> (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. 	<ol style="list-style-type: none"> (1) Removal of hazards such as eliminating dangerous methods of construction. (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment. (3) Engineering measures. (4) Management measures including improving skills with additional training. (5) Use of PPE. <p>1.9 Contractor's Method Statements</p> <p>1.9.1 The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.</p> <p>1.9.2 Method Statements shall <u>be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and (JC17)</u> include details of all Permanent Works and Temporary Works with supporting documents such as:</p> <p>JC17: Better to have a linkage with the risk assessment.</p> <p>NK5/6: Will modify as commented.</p> <ol style="list-style-type: none"> (1) Studies, investigations and designs. (2) Structural calculations and any other calculations. (3) Specifications and technical details. (4) Proposed construction procedure, sequence and method. (5) Construction resources including superintendents, workers, operation leaders and Contractor's Equipment. (6) Inspection and monitoring plan. <p>1.9.3 The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.</p> <p>1.9.4 Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:</p> <ol style="list-style-type: none"> (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen 	<p>earlier listed items having higher priority:</p> <ol style="list-style-type: none"> (1) Removal of hazards such as eliminating dangerous methods of construction. (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment. (3) Engineering measures. (4) Management measures including improving skills with additional training. (5) Use of PPE. <p>1.9 Contractor's Method Statements</p> <p>1.9.1 The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.</p> <p>1.9.2 Method Statements shall <u>be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and (JC17)</u> include details of all Permanent Works and Temporary Works with supporting documents such as:</p> <ol style="list-style-type: none"> (1) Studies, investigations and designs. (2) Structural calculations and any other calculations. (3) Specifications and technical details. (4) Proposed construction procedure, sequence and method. (5) Construction resources including superintendents, workers, operation leaders and Contractor's Equipment. (6) Inspection and monitoring plan. <p>1.9.3 The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.</p> <p>1.9.4 Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:</p> <ol style="list-style-type: none"> (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen
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<p>Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.</p> <p>(2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.</p> <p>(3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.</p> <p>(4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.</p> <p>(5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.</p> <p>NK: We consider “for his information” can be deleted because this phrase is not used for Safety Plan though Issue 6 used it.</p> <p>Changed.</p> <p>1.10 Engineer’s Safety Representative</p> <p>1.10.1 Unless otherwise specified in the Particular Safety Specification, the Engineer’s delegated representative at the Site shall act as the Engineer’s health and safety representative for the purpose of complying with any health and safety obligations under JSSS.</p> <p>1.10.2 The terms of the appointment shall be in accordance with GC 3.2 [<i>Delegation by the Engineer</i>].</p> <p>1.10.3 Whenever the term “Engineer” is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.</p> <p>1.11 Safety Compliance Instructions from the Engineer</p> <p>1.11.1 Without affecting or diminishing the Contractor’s responsibility under GC 4.1 [<i>Contractor’s General Obligations</i>] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor’s performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and</p>	<p>(14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.</p> <p>(2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.</p> <p>(3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.</p> <p>(4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.</p> <p>(5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.</p> <p>1.10 Engineer’s Safety Representative</p> <p>1.10.1 <u>The Engineer may delegate his power and authority to any of his assistant at the Site who (JC18)</u> shall act as the Engineer’s health and safety representative for the purpose of complying with any health and safety obligations under JSSS.</p> <p>JC18: Particular Safety Specification is not necessary with this modification.</p> <p>NK5/6: Will modify as commented.</p> <p>1.10.2 The terms of the appointment shall be in accordance with GC 3.2 [<i>Delegation by the Engineer</i>].</p> <p>1.10.3 Whenever the term “Engineer” is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.</p> <p>1.11 Safety Compliance Instructions from the Engineer</p> <p>1.11.1 Without affecting or diminishing the Contractor’s responsibility under GC 4.1 [<i>Contractor’s General Obligations</i>] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor’s performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and</p>	<p>(14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.</p> <p>(2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.</p> <p>(3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.</p> <p>(4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.</p> <p>(5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.</p> <p>1.10 Engineer’s Safety Representative</p> <p>1.10.1 The Engineer may delegate his power and authority to any of his assistant at the Site who (JC18) shall act as the Engineer’s health and safety representative for the purpose of complying with any health and safety obligations under JSSS.</p> <p>1.10.2 The terms of the appointment shall be in accordance with GC 3.2 [<i>Delegation by the Engineer</i>].</p> <p>1.10.3 Whenever the term “Engineer” is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.</p> <p>1.11 Safety Compliance Instructions from the Engineer</p> <p>1.11.1 Without affecting or diminishing the Contractor’s responsibility under GC 4.1 [<i>Contractor’s General Obligations</i>] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor’s performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and</p>
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<p>preventive measures to comply with the Contract.</p> <p>1.11.2 If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [Suspension of Work] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.</p> <p>1.11.3 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [Suspension of Work] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer's consent and implemented such measures to ensure that no such accident can reoccur.</p> <p>1.11.4 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.</p> <p>1.12 Health and Safety Officer at the Site (HSO)</p> <p>1.12.1 For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7[<i>Health and Safety</i>], shall be construed as "Health and Safety Officer at the Site".</p> <p>NK: HSO is defined in A1.1.1(3), so can 1.12.1 be deleted?</p> <p>No: This is necessary to correspond to the definition.</p> <p>Please note that this is a compromise, PC change would have been preferable.</p> <p>1.12.2 Requirements for the HSO:</p> <ol style="list-style-type: none"> (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date. (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor's Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent. (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety]. (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer. 	<p>preventive measures to comply with the Contract.</p> <p>1.11.2 If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [Suspension of Work] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.</p> <p>1.11.3 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [Suspension of Work] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer's consent and implemented such measures to ensure that no such accident can reoccur. (JC19)</p> <p>JC19: The sentence is not complete???</p> <p>NK5/6: To Md, please review the sentence.</p> <p>1.11.4 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.</p> <p>1.12 Health and Safety Officer at the Site (HSO)</p> <p>1.12.1 For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7[<i>Health and Safety</i>], shall be construed as "Health and Safety Officer at the Site".</p> <p>1.12.2 Requirements for the HSO:</p> <ol style="list-style-type: none"> (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date. (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor's Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent. (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety]. (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer. 	<p>preventive measures to comply with the Contract.</p> <p>1.11.2 If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [Suspension of Work] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.</p> <p>NK5/6: To Md, please review the sentence.</p> <p>Thank you, I suggest editing as follows:</p> <p>1.11.3 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [Suspension of Work] and not allow work to recommence until such time as:</p> <ol style="list-style-type: none"> (1) the cause has been investigated and established by the Contractor; (2) corrective and preventive measures have been formulated by the Contractor and proposed to the Engineer; (3) the Engineer's consent has been obtained for such measures; and (4) the measures have been implemented to ensure that no such accident can reoccur. <p>1.11.4 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.</p> <p>1.12 Health and Safety Officer at the Site (HSO)</p> <p>1.12.1 For the purposes of interpretation under JSSS, the reference to "accident prevention officer at the Site" in GC 6.7[<i>Health and Safety</i>], shall be construed as "Health and Safety Officer at the Site".</p> <p>1.12.2 Requirements for the HSO:</p> <ol style="list-style-type: none"> (1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date. (2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor's Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent. (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety]. (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
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- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management.

- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management. (JC20)

Where there is no legal requirement under the Laws of the Country or unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as that International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK Level 6 Diploma level or Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) in USA or an equivalent alternative internationally recognised qualification covering health and safety and risk management.

JC20: To NK, Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia

NK5/6: We rechecked the qualification of HSO required in the world and tabulated below:

No	Country	Law/Regulation	Title	Requirements	Work Experience
1	Japan	Ordinance on Industrial Safety and Health	Safety Officer	1. Trained personnel for 9 hrs training course, or	University or technical college science course other courses
					in S&H 2 years
					4 years
					Senior high school science course other courses
					in S&H 4 years 6 years
					Others in S&H 7 years
				2. Industrial safety consultants.	
2	USA	OSHA APPENDIX C TO §1926.65 COMPLIANCE GUIDELINES Occupational Safety and Health Program. U.S. Army Corps of	e.g. Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) The Safety and Health Manager	CSP 1) Bachelor's degree, and 2) BCSP Qualified Credential (e.g. NEBOSH National or International Diploma in Occupational Health and Safety) 3) CSP examination	4 years of safety experience

- (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
- (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
- (7) Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management. (JC20)

NK: From the above, we propose to revise the (7) as above so that the qualification of HSO shall be 1) licensed or registered in the Country (legal requirement under the Laws of the Country), 2) specified in the Particular Safety Specification, and 3) International Diploma issued by NEBOSH in UK or Certified Safety Professionals by BCSP in USA or an equivalent alternative.

No problem with the above, I suggest editing as follows:

Where there is no legal requirement under the Laws of the Country and unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as:

- (a) an International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK; or
- (b) Certification as a Certified Safety Professionals (CSP) by the Board of Certified Safety Professionals (BCSP) in USA; or
- (c) an equivalent alternative internationally recognised qualification covering health and safety and risk management.

		Engineers, EM-385	shall be the CSP.		
3	UK	Internet Information	Environmental Health and safety manager	1) Bachelor's degree in Safety Engineering, etc. 2) National/International Diploma 1. NEBOSH National Diploma in Occupational Health and Safety. 2. British Safety Council Level 6 Diploma in Occupational Safety and Health., etc.	5 years related experience in environmental health and safety.
4	Singapore	Regulations	1) Representative of the Contractor 2) Safety Supervisor	1) Training and exam. of 3 days 2) Training of 10 hrs per week for 6 months (60 hrs)	
5	India	Regulation	1) Safety Officer 2) Safety Staff	1) Graduation of safety course more than 2 years in college 2) Training course	
6	Thailand	Regulation	1) Head Man Level 2) Technique Level 3) High Technique Level 4) Professional Level 5) Management Level	1) 12 hr training 2) Ditto 3) 180 hr training 4) Graduation of Occupational health bachelor course, or person trained & passed exam., or safety officer of 5 years experience and trained & passed exam. 5) 12 hr training	
7	Indonesia	Regulation	Occupational Health and safety Expert	10 days (90 hrs) training	
8	Vietnam	Regulation	Not found yet.		

NK: We found each country has its regulation regarding qualification of Safety Officer. Japanese one is almost same level as Head Man Level and Technique Level in Thailand.

In Japanese regulation, the Project Manger shall be a General Safety and Health Manager and supervise the Safety officer(s). Japanese contractors may not assign Japanese engineers directly as HSO though they have experience and knowledge of safety management in construction sites and also ability to manage safety in ODA projects. However, they have no academic certificates in Japan and also international training certificates. The Japanese contractors who work for ODA projects may employ safety specialist who having qualification required in the contract or make their engineers be certified by international organizations such as NEBOSH and BCSP. The contractor's engineers can get such certificates by on-line training course.

Japan, USA and UK give special importance to the S&H work experience, Singapore and Indonesia do to training of 60 to 90 hrs course, and Thailand do to any of bachelor, training or experience.

Actually, depending on scale and accident risk of construction project, the employer or contractor seem to determine requirements of HSO for example the following may be applied for large or complicated projects, NEBOSH International ~~National~~ Diploma (Level 6) in UK and CSP (Certified Safety Professionals) by BCSP in USA, for small projects, International General Certificate (A level) in UK and SMS (Safety Management Specialists) in USA.

NK: From the above, we propose to revise the (7) as above so that the qualification of HSO shall be 1) licensed or registered in the Country (legal requirement under the Laws of the Country), 2) specified in the Particular Safety Specification, and 3) International Diploma issued by NEBOSH in UK or Certified Safety Professionals by BCSP in USA or an equivalent alternative.

<p>(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country); and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.</p> <p>NK: We considers NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot not find such person. Large contractors and European contractors may find them.</p> <p>We propose to add (7) "unless otherwise specified in Particular Safety Specification" before "the HSO..."</p> <p>I have split this clause for clarity</p> <p>I suggest that NEBOSH is OK as it is because an equivalent alternative is acceptable (see use of this term in JSSS 1.4.7.</p> <p>It is also subject to receiving the consent of the Engineer.</p> <p>NK: We think "two (2) years experience outside the Country" is also too high requirement for the local contractors and also Japanese.</p> <p>We propose to delete "this two years outside the Country" and specify requirement in Particular Safety Specification depending on the Works.</p> <p>I suggest that it is better to state here as a basic standard. If JSSS cannot specify a general standard, the choice of Executing Agencies will vary greatly. I will draft a relevant clause for the User Guide but please note that I have reduced the experience requirements and deleted the international requirements.</p> <p>1.12.3 Supporting Staff</p> <p>NK-1: JICA commented and minutes recorded in January as follows:</p> <p>7.1.1 (5) HSO's duties:</p> <p>JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.</p> <p>No this is not a correct understanding, the HSO duties and obligations are far wider which is why this clause is correct and necessary</p> <p>Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?</p> <p>Yes, he will be very busy which is why he must be qualified and experience and given the full support staff that he requires and why he must receive the support of other Contractor's Personnel particularly Operation Leaders, all as stated herein.</p> <p>MM: HSO should always be ultimately responsible as the leader really of the Contractor's safety team with support duties delegated as necessary to a number of personnel including Operation Leaders. This is described in Chapter 1.10.1 and has been discussed. No change is required.</p> <p>NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:</p> <p>3. Common requirements in JSSS</p> <p>(4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の "The HSO shall inspect work area before starting work..." は、 "The Contractor shall ..."へ変更する。</p> <p>HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.</p>	<p>(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.</p> <p>1.12.3 Supporting Staff</p>	<p>(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management, and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.</p> <p>1.12.3 Supporting Personnel</p> <p>Heading is changed to be consistent with the content.</p>
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<p><i>From this idea, the HSO in the sentence "The HSO shall inspect work area before starting work..." shall be replaced with "the Contractor".</i></p> <p><i>Please let me review the Excavation comments when I receive them, however this looks correct as he is responsible for inspecting the safety arrangements, even if another person does the inspection on his behalf. It needs no change but the work will not always be directly inspected by him, he can and will delegate but he is singularly responsible and will sign it off.</i></p> <p>NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).</p> <p>We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor's Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.</p> <p>Based on the above idea, we want to revise some sentences below.</p> <p>(1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.</p> <p>(2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.</p> <p>NK: We propose to delete (2) from the idea of mentioned above NK-3. The supporting personnel shall be full time assignment. The Contractor shall establish system of daily check by the site staff or designated personnel for check by the Contractor and reporting by the site manager to the HSO.</p> <p><i>I think that (2) is clear, correct and necessary. Please refer to the following clauses also. It can be full time assistants or other Contractor's Personnel also who shall check certain aspects and who shall also have other responsibilities given to them by the HSO.</i></p> <p>NK: MD氏は、まだ supporting personnel についての貴機構の意見をまだ十分理解していないように感じておりますが、貴機構のご意見はいかがでしょうか？</p> <p>(3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.</p> <p>(4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.</p> <p>(5) The HSO shall be expected to develop internal procedures whereby all supporting personnel, shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.</p>	<p>(1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.</p> <p>(2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.</p> <p>(3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.</p> <p>(4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.</p> <p>(5) The HSO shall be expected to develop internal procedures whereby all supporting personnel (JC21) shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the HSO to sign all inspection records as if the inspection has been carried out by the HSO.</p> <p>JC21: It is understood "internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO....." But how "and the details of any inspection, for" relates to other part of this sentence???</p> <p>Non-natives would have difficulty to understand.</p>	<p>(1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.</p> <p>(2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.</p> <p>(3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.</p> <p>(4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.</p> <p>To MD, we would like to review the sentence because of sentence seems too long.</p> <p><i>I suggest the above is edited as follows:</i></p> <p>(5) The HSO shall prepare an internal procedure for the management of his supporting personnel, to ensure that:</p> <p>(a) Supporting personnel are made aware of the requirements for any inspection and the details thereof.</p> <p>(b) Supporting personnel immediately advise the HSO of any unsafe conditions with recommendations to prohibit the start or to stop or to change safety practices for the particular work</p> <p>(c) Communications and submissions between HSO and supporting personnel are efficient, timely and clear.</p>
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<p>(6) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.</p> <p>1.12.4 Inspections</p> <p>(1) The HSO shall be responsible for ensuring:</p> <p>(a) That all working areas of the Site are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;</p> <p>(b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and</p> <p>(c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE].</p> <p>(2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.</p> <p>1.13 HSO - Scope of Duties and Authority</p> <p>NK: JICA added "and Authorities" in the last comment.</p> <p>Now changed as above</p> <p>1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.</p> <p>1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:</p> <p>(1) Health and Safety Management Work:</p> <p>(a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;</p> <p>(b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;</p> <p>(c) Regular (daily) inspections of the Works at the Site to ensure</p>	<p>NK5/6: YH think the sentence can be separated as follows though no so much difficult to understand the sentence 1) the requirements for any inspection 2) the details of any inspection</p> <p>To MD, we would like to review the sentence because of sentence seems too long.</p> <p>(6) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.</p> <p>1.12.4 Inspections</p> <p>(1) The HSO shall be responsible for ensuring:</p> <p>(a) That all working areas (JC22) are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;</p> <p>JC22: The working areas are not always a part of the Site</p> <p>NK5/6: No comment to JC because JICA want to modify as they commented.</p> <p>(b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and</p> <p>(c) hat all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE].</p> <p>(2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.</p> <p>1.13 HSO - Scope of Duties and Authority</p> <p>1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.</p> <p>1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:</p> <p>(1) Health and Safety Management Work:</p> <p>(a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;</p> <p>(b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;</p> <p>(c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;</p>	<p>Following implementation and compliance with the above procedure, the HSO shall sign all inspection records as if the inspection has been carried out by the HSO.</p> <p>(6) Where the Works or any part of the Works is to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified supporting personnel~ for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.</p> <p>1.12.4 Inspections</p> <p>(1) The HSO shall be responsible for ensuring:</p> <p>(a) That all working areas (JC22) are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;</p> <p>(b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to all affected persons and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and</p> <p><i>This is not directly connected with the provision of health and safety measures as referred to in 1.2.2 (6), however I suggest that in this case the wording is changed as above to make it non-specific and therefore of wider w=effect</i></p> <p>(c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE].</p> <p>(2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.</p> <p>1.13 HSO - Scope of Duties and Authority</p> <p>1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.</p> <p>1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:</p> <p>(1) Health and Safety Management Work:</p> <p>(a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;</p> <p>(b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;</p> <p>(c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;</p>
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<p>the Contractor's compliance with the Safety Plan, Instructions and other measures;</p> <p>(d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;</p> <p>(e) Temporarily stopping the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>];</p> <p>(f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;</p> <p>(g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;</p> <p>(h) Appointment of further supporting personnel (refer to 1.12.3 [<i>Supporting Staff</i>]);</p> <p>(i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;</p> <p>NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above: (i) <i>Instructing and training the person in charge of construction works and the Contractor's Equipment in the health and safety aspects of their work including requirements for inspection and reporting of results to HSO;</i></p> <p><i>I disagree and do not feel that any change is necessary. The position and authority of the HSO for the health safety on the Works should not be compromised. Who he requires assistance from is really his choice and it is dependent upon many factors such as the contractor's organisation, who is available, the general experience, capability and skill level of workers. We or the Engineer should have no interest in who he delegates support to providing the HSO does his job properly.</i></p> <p>NK: 貴機構のコメントを伝えましたが、MD氏はまだ上記の意見です。貴機構のご意見はいかがでしょうか？</p> <p>(j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;</p> <p>(k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;</p> <p>(l) Planning and implementation of various training and education implementation plans;</p> <p>(m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;</p> <p>(n) Preparing regular internal and external reports on health and safety activities; and</p> <p>(o) Hazard prediction activity.</p>	<p>(d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;</p> <p>(e) Temporarily stopping the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>];</p> <p>(f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;</p> <p>(g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;</p> <p>(h) Appointment of further supporting personnel (refer to 1.12.3 [<i>Supporting Staff</i>]);</p> <p>(i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;</p> <p>(j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;</p> <p>(k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;</p> <p>(l) Planning and implementation of various training and education implementation plans;</p> <p>(m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;</p> <p>(n) Preparing regular internal and external reports on health and safety activities; and</p> <p>(o) Hazard prediction activity.</p>	<p>(d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;</p> <p>(e) Temporarily stopping the Works or any part of the Works where the Engineer so instructs in accordance with JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>];</p> <p>(f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;</p> <p>(g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;</p> <p>(h) Appointment of further supporting personnel (refer to 1.12.3 [<i>Supporting Staff</i>]);</p> <p>(i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;</p> <p>(j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;</p> <p>(k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;</p> <p>(l) Planning and implementation of various training and education implementation plans;</p> <p>(m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;</p> <p>(n) Preparing regular internal and external reports on health and safety activities; and</p> <p>(o) Hazard prediction activity.</p>
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<p>1.14 Procedure for Resuming the Works</p> <p>1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [<i>HSO - Scope of Duties and Authority</i>] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:</p> <ol style="list-style-type: none"> (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur. (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer. (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer. (4) If the Engineer gives no such notice of non-compliance for the original proposal within fourteen (14) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving seven (7) days' notice in writing of the resumption date. <p>To be proactive, the Engineer may give consent at any stage within the above stated time scales.</p> <ol style="list-style-type: none"> (5) The Contractor resumes the Works or part of the Works on the due date. (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer. (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary. <p>1.15 Contractor's Safety Management Activities</p> <p>1.15.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.</p> <p>1.15.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):</p> <p><i>NK: We think the 1.15 is same as Japanese draft, however, we feel it is not clear who take the following action. Is there any good idea to express the H&S management shall be made by management personnel consisting of construction managers, Operation Leaders, HSO (for reference I added personnel in charge of the activities below.). Please see above notes, I do not feel that the following is desirable or necessary.</i></p>	<p>1.14 Procedure for Resuming the Works</p> <p>1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [<i>HSO - Scope of Duties and Authority</i>] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:</p> <ol style="list-style-type: none"> (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur. (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer. (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer. (4) If the Engineer gives no such notice of non-compliance for the original proposal within seven (7) (JC23) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving three (3) (JC24) days' notice in writing of the resumption date. <p>To be proactive, the Engineer may give consent at any stage within the above stated time scales.</p> <p>JC23& 24: 14 days are too long, and 7 days are too long. NK5/6: Will modify as commented.</p> <ol style="list-style-type: none"> (5) The Contractor resumes the Works or part of the Works on the due date. (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer. (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary. <p>1.15 Contractor's Safety Management Activities</p> <p>1.15.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.</p> <p>1.15.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):</p>	<p>1.14 Procedure for Resuming the Works</p> <p>1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [<i>HSO - Scope of Duties and Authority</i>] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:</p> <ol style="list-style-type: none"> (1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur. (2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer. (3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer. (4) If the Engineer gives no such notice of non-compliance for the original proposal within seven (7) (JC23) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving three (3) (JC24) days' notice in writing of the resumption date. <p>To be proactive, the Engineer may give consent at any stage within the above stated time scales.</p> <ol style="list-style-type: none"> (5) The Contractor resumes the Works or part of the Works on the due date. (6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer. (7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary. <p>1.15 Contractor's Safety Management Activities</p> <p>1.15.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.</p> <p>1.15.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):</p>
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For further understanding, the Contractor's Representative has similar in fact heavier responsibilities but we (nor FIDIC) consider defining which of his staff do what to support him. I do not recommend but we try to do it.

(1) Overall Safety Management Activities:

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); ~~(by construction managers, Operation Leaders, HSO)~~
- ~~(b)~~ Attending pre-work meetings, pre-start meetings, schedule meetings; and ~~(by construction managers, HSO)~~
- (c) Monitoring the implementation of the Safety Plan. ~~(by HSO)~~

Above is not recommended

(2) Daily Safety Management of Contractor's Personnel:

NK: We would like to add "Daily" before Safety in (2) to distinguish from (1).

No problem added already

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; ~~(by construction managers, HSO)~~
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures; ~~(by construction managers, Operation Leaders)~~
- ~~(c)~~ Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: ; ~~(by construction managers, Operation Leaders)~~
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
- ~~(d)~~ Instruction and management of safety education and training; ~~(by construction managers, HSO)~~
- ~~(e)~~ Instruction and management of all safety measures; and ~~(by construction managers, Operation Leaders, HSO)~~
- (f) Site Safety Inspections—~~(by construction managers, Operation Leaders, HSO)~~

None of above is recommended

NK: We withdraw the addition.

NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.

No problem deleted already

1.16 Joint Site Safety Inspections

1.16.1 In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.

(1) Overall Safety Management Activities

- (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM);
- (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and
- (c) Monitoring the implementation of the Safety Plan.

(2) Daily Safety Management of Contractor's Personnel:

- (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM;
- (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures;
- (c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: ;
5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;
- (d) Instruction and management of safety education and training;
- (e) Instruction and management of all safety measures; and
- (f) Site Safety Inspections

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1.16.1 In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.

<p>1.16.2 Frequency of Joint Site Safety Inspections shall be at least once a week.</p> <p>1.16.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.</p> <p>1.16.4 The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.</p> <p>1.16.5 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.</p> <p>1.17 Compliance Monitoring and Auditing</p> <p>1.17.1 The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured. Such compliance shall be monitored efficiently and transparently at all times, for which purpose the Contractor shall:</p> <p>NK: We propose to divide the above to two sentences because the above sentence is long and contains two subjects. This is not quite correct but I have divided anyway.</p> <ol style="list-style-type: none"> (1) Create checklists for monitoring. (2) Carry out regular and random inspections. (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents. (4) Create storage and filing systems for the monitoring records. (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer. <p>1.17.2 Safety inspections are intended to search for risks and hazards, which present a threat to safe working.</p> <p>1.17.3 The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:</p> <ol style="list-style-type: none"> (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements? (2) Are the Safety Plan requirements being met? (3) Is there documented proof of compliance? (4) Is health and safety training effective? (5) Is the Contractor's health and safety management system working effectively? <p>1.17.4 The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.</p> <p>1.17.5 The audit team procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer. Unless otherwise consented to by the Engineer,</p>	<p>1.16.2 Frequency of Joint Site Safety Inspections shall be at least once a week.</p> <p>1.16.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.</p> <p>1.16.4 The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.</p> <p>1.16.5 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.</p> <p>1.17 Compliance Monitoring and Auditing</p> <p>1.17.1 The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured. 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This is not quite correct but I have divided anyway</p> <p>1.17.11 The audits shall be conducted on a random basis at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.</p> <p>1.17.12 The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor.</p> <p>NK: JICA deleted in the last comment. We also consider the Engineer does not do auditing but inspection/supervise the Contractor's activities, and agree to delete this. I do not really understand why it is deleted, as in any case the Engineer should be able to request/initiate an audit if he feels that the H and S system is not working properly.</p> <p>NK: NK misunderstood this clause as the Engineer to do audit. We recommend now as follows;(time limit is given considering the preparation and trip time of the auditing team, and the safety management state cannot be improved in short time except such as cleaning the site, etc. If the Contractor takes actions for the auditing in short time, there is a merit for the Contractor to show example of required improvement. The Engineer may at his option instruct the Contractor to execute a health and safety audit by giving proper preparation time for the auditing team between 3 days and 7 days.</p> <p>NK: 機構のご意見はいかがでしょうか。</p> <p>1.17.13 Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.</p> <p>NK: JICA commented "Such "not to do" should not be included in the specification." and deleted this sentence in the last comment. We agree to delete this because the auditing team cannot come to the site from Headquarters located in other countries by short notice, and the ISO auditing is made by around one month notice or as scheduled. No comment, to be deleted</p> <p>1.17.14 An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.</p>	<p>1.17.6 The audit shall be headed by a senior member of the Contractor's head office health and safety team.</p> <p>1.17.7 If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.</p> <p>1.17.8 The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.</p> <p>1.17.9 The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.</p> <p>1.17.10 The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems.</p> <p>1.17.11 The Audits shall not replace the regular health and safety inspections.</p> <p>1.17.12 The audits shall be conducted at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.</p> <p>1.17.13 The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor. (JC25)</p> <p>JC25: It is not practical that the auditing team of the headquarters visit the Site within 3 to 7 days after the Engineer's instruction.</p> <p>NK: 1.17.11(1.17.12) will be deleted.</p> <p>1.17.14 An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. 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<p>1.17.15 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.</p> <p>1.18 Proper Placement of Contractor's Personnel</p> <p>1.18.1 To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.</p> <p>1.18.2 In compliance with GC 6.9 [<i>Contractor's Personnel</i>], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.</p> <p><i>Change not correct</i></p> <p>1.18.3 Labourers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.</p> <p>1.18.4 The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.</p> <p>1.18.5 The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement.</p> <p>1.18.6 The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.</p> <p>1.18.7 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:</p> <ol style="list-style-type: none"> (1) Work content and work environment. (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability. (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts. (4) Allocation of an achievable and safe work volume and time. (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [<i>Child Labour</i>]. 	<p>1.17.15 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.</p> <p>1.18 Proper Placement of Contractor's Personnel</p> <p>1.18.1. To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.</p> <p>1.18.2. In compliance with GC 6.9 [<i>Contractor's Personnel</i>], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. 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The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.</p> <p>1.18.7. Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:</p> <ol style="list-style-type: none"> (1) Work content and work environment. (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability. (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts. (4) Allocation of an achievable and safe work volume and time. 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These records shall be made available for inspection by the Engineer.</p> <p><i>The above will require editing as above in view of your change</i></p> <p>1.18.6 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:</p> <ol style="list-style-type: none"> (1) Work content and work environment. (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability. (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts. (4) Allocation of an achievable and safe work volume and time. (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [<i>Child Labour</i>].
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<p>1.18.8 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.</p> <p>1.18.9 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.</p> <p>1.18.10 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that the HSO resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.</p> <p>NK: We think it is better to replace "he" with "the HSO" though he/she is nowadays used. It is not necessary, please refer to JSSS 1.2.2 (8) and GC 1.2.(a). I have used "He" and "his" for example consistently and if it changes here it will require further change.</p> <p>1.19 Safety Training Generally</p> <p>1.19.1 The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.</p> <p>1.19.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.</p> <p>1.19.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.</p> <p>1.20 Safety Induction Training</p> <p>1.20.1 Safety induction training shall be provided by the Contractor for all</p>	<p>1.18.8. If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.</p> <p>1.18.9. The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.</p> <p>1.18.10. The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. 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And those people must be trained (e.g. induction training) in English.</p> <p>NK5/6: Will modify as commented.</p> <p>1.20 Safety Induction Training</p> <p>1.20.1. Safety induction training shall be provided by the Contractor for all</p>	<p>1.18.7 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.</p> <p>1.18.8 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.</p> <p>1.18.9 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. 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<p>Contractor's Personnel, any subcontractors, suppliers and others for whom he the HSO is responsible, including the Employer's Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.</p> <p>Ditto above</p> <p>1.20.2 The following subjects shall be covered:</p> <ol style="list-style-type: none"> (1) Responsible persons, chain of command and means of communication. (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care. (3) Working procedures generally. (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment. (5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (Refer to separate requirements for special training). <p>NK: May we know where we can find to refer to special training? Rephrased</p> <ol style="list-style-type: none"> (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment. (7) Maintaining all working areas in an orderly, tidy and clean condition at all times. (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting. (9) Firefighting; actions, precautions and control. (10) Health and safety rules. (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned. (12) Emergency Response Plan; evacuation and calling list. (13) Other related health and safety matters. <p>1.20.3 Practical on-Site demonstrations shall be included.</p> <p>1.20.4 Training Personnel</p> <ol style="list-style-type: none"> (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators. 	<p>Contractor's Personnel, any subcontractors, suppliers and others for whom the HSO is responsible, including the Employer's Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.</p> <p>1.20.2. The following subjects shall be covered:</p> <ol style="list-style-type: none"> (1) Responsible persons, chain of command and means of communication. (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care. (3) Working procedures generally. (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment. (5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment. (7) Maintaining all working areas in an orderly, tidy and clean condition at all times. (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting. (9) Firefighting; actions, precautions and control. (10) Health and safety rules. (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned. (12) Emergency Response Plan; evacuation and calling list. (13) Other related health and safety matters. <p>1.20.3. Practical on-Site demonstrations shall be included.</p> <p>1.20.4. Training Personnel (JC28) JC28: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training). NK5/6: NK agreed to the above.</p> <ol style="list-style-type: none"> (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators. 	<p>Contractor's Personnel, any subcontractors, suppliers and others for whom the HSO is responsible, including the Employer's Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.</p> <p><i>This is training and may not be directly connected with the provision of health and safety measures as referred to in 1.2.2 (6). I suggest for clarity that the full wording should remain.</i></p> <p>1.20.2 The following subjects shall be covered:</p> <ol style="list-style-type: none"> (1) Responsible persons, chain of command and means of communication. (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care. (3) Working procedures generally. (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment. (5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment. (7) Maintaining all working areas in an orderly, tidy and clean condition at all times. (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting. (9) Firefighting; actions, precautions and control. (10) Health and safety rules. (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned. (12) Emergency Response Plan; evacuation and calling list. (13) Other related health and safety matters. <p>1.20.3 Practical on-Site demonstrations shall be included.</p> <p>1.20.4 Training Personnel (JC28)</p> <ol style="list-style-type: none"> (1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.
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<p>(2) All trainers shall be fluent in the language of the persons to be trained.</p> <p>(3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.</p> <p>1.20.5 Records of education and training</p> <p>The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.</p> <p>1.21 Skill Training</p> <p>1.21.1 The Contractor is reminded of his obligations under GC 6.9 [<i>Contractor's Personnel</i>] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost.</p> <p>1.21.2 The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects.</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works, Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.</p> <p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety</p>	<p>(2) All trainers shall be fluent in the language of the persons to be trained.</p> <p>(3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.</p> <p>1.20.5. Records of education and training</p> <p>The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.</p> <p>1.21 Skill Training</p> <p>1.21.1. The Contractor is reminded of his obligations under GC 6.9 [<i>Contractor's Personnel</i>] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. (JC29)</p> <p>JC29: Not needed to say so in the specification.</p> <p>NK: Will delete as commented.</p> <p><u>1.21.2. The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if the qualified, skilled and experienced Contractor's Personnel required by the Contract is not available in the Country or not available in the numbers or of the standards of for the periods required, the Contractor shall:</u></p> <p><u>(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or</u></p> <p><u>(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.</u></p> <p>(JC30)</p> <p>JC30: May be the case in many projects, but skilled staff may be sometimes locally mobilized.</p> <p>NK5/6: Will modify as commented.</p>	<p>(2) All trainers shall be fluent in the language of the persons to be trained.</p> <p>(3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.</p> <p>1.20.5 Records of education and training</p> <p>The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.</p> <p>1.21 Skill Training</p> <p>(NK 注: 1.21 は変更が複雑であり、以下は整理が不十分です。この後、DFR 用に変更がされています。)</p> <p>1.21.1 The Contractor is reminded of his obligations under GC 6.9 [<i>Contractor's Personnel</i>] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. (JC29)</p> <p><u>1.21.2 The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if the qualified, skilled and experienced Contractor's Personnel required by the Contract is not available in the Country or not available in the numbers or of the standards of for the periods required, the Contractor shall:</u></p> <p><u>(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or</u></p> <p><u>(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.</u></p> <p>(JC30)</p> <p>NK5/6: Will modify as commented.</p> <p><u>Notes for NK</u></p> <p><i>This is already reflected in FIDIC, 6.1 second paragraph. The suggested change actually changes the FIDIC contract requirements by introducing the wording: "to the extent practicable and reasonable". Such a change is not necessary and not recommended.</i></p> <p><i>I had drafted this clause to strengthen the requirements for importing foreign resources, obviously where they are not available locally. The suggested added wording has no contractual meaning and will definitely weaken if not destroy any attempt by the Engineer (or Employer) to impose stronger requirements for importing foreign skilled persons even though the Employer is already paying for it. I note the other deletions, which also tend to weaken requirements.</i></p> <p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion <u>and Defect Notification</u></p>
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<p>throughout the Time for Completion.</p> <p>Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply:.</p>	<p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion <u>and Defect Notification Period</u>.(JC31)</p> <p>JC31: The Contractor also has to work during DNP and need skilled staff.</p> <p>NK5/6: Will modify as commented.</p> <p>Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply:. (JC32)</p> <p>JC32: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences? I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.</p> <p>NK5/6: To MD, please review the comment and modify the sentences.</p>	<p><u>Period</u>.(JC31)</p> <p>NK5/6: To MD, please review the comment and modify the sentences.</p> <p><i>Your comment requests that training be provided for other workers in addition to operation leaders.</i></p> <p><i>Your original draft required training only for operation leaders and workers engaged in dangerous work.</i></p> <p><i>Your draft documents contained requirements which were very unclear and which had little or actually no connection with the contract.</i></p> <p><i>Dangerous work is covered by 1.20.2</i></p> <p><i>Please refer to my comments on your original draft which I have explained since; I have advised that the Contractor already has a basic obligation to provide appropriately qualified, skilled and experienced personnel under the contract (see GC 6.1 and 6.9) and these contract requirements must not be compromised.</i></p> <p><i>I had explained that it is illogical and contractually incorrect to require the Contractor to provide skilled personnel (where necessary importing skilled foreign personnel) under the Contract, expect the Employer to pay for this via the Contract Price, yet then assign non-compliant workers and other personnel and expect the Employer to pay for further skill training.</i></p> <p><i>If this is required, the extent to which this is to be applied clearly needs to be carefully defined and controlled otherwise it can be argued that having complied with the training requirements he is not responsible for providing any additional capable and skilled persons unless the employer allows and pays for more skill training.</i></p> <p><i>I am reluctant to add further skill training without knowing your precise additional requirements. Can you therefore please describe who shall receive skill training, to what level, with what resources, how to be managed and paid for and how this is to be made compatible with the Contract and I will edit your text as necessary and include this against earlier advice.</i></p> <p><i>On the basis that skill training is only required to develop the skills of local operation leaders (which is still stretching the contract), I suggest editing this subclause as follows:</i></p> <p><u>1.21.21.21.3</u> Further Training of Operation Leaders</p> <ol style="list-style-type: none"> (1) Unless otherwise specified in the Particular Safety Specification and without limiting or changing the Contractor's obligations under the Contract, the Contractor shall be required to select candidates from his local skilled workforce that he considers are suitable to act as future Operation Leaders. (2) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to
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<p>(1) To compliment this OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to provide basic skill training to develop the ability of local counterpart trainee operation leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots.</p> <p>(2) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer <u>for his consent</u>.</p> <p>The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.</p> <p><u>Details of such training shall be submitted with the Bid Stage Safety Plan.</u></p> <p>NK: This request is specified in Annex 1.2 (24)(26) as Outline shall be submitted in Bid Stage SP.</p> <p><i>This has been repeatedly discussed and explained. If safety is to improve, this must happen from Bid stage onwards. Every part of the Bid SP is Outline but some information is necessary on each subject listed in the Annex and should be submitted at Bid stage. If it is inadequate, only then can it be clarified and negotiated before the Contract is signed. After signing, is often too late.</i></p> <p>NK: We agree to MD's opinion. However, the above sentence needs to be modified to such as "Updated details of such training mentioned in the Bid Stage Safety Plan shall be submitted."</p> <p>1.21.3 Subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.</p> <p>1.21.4 When the Contractor is satisfied that candidates have been successfully trained and qualified, and that they are able to act fully in accordance with the requirements of the Contract and subject to receiving the consent of the Engineer, the Contractor may demobilise the Contractor's Personnel from other countries</p> <p>NK: This sentence may be necessary to be reviewed.</p> <p><i>Please review the above. Control is essential otherwise the working trainers will be demobilised too soon. Please also note that this entire clause is my suggestion only, if JICA and/or NK do not want it, please advise and I will delete all such training as necessary.</i></p> <p>NK: 機構のご意見はいかがでしょうか？</p> <p>1.21.5 It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice based upon capability in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.</p>	<p>(1) To compliment this OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to provide basic skill training to develop the ability of local counterpart trainee operation leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots.</p> <p>(2) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer <u>for his consent</u>.</p> <p>The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.</p> <p><u>Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.</u></p>	<p>develop their management abilities, skill levels and awareness of international safety and quality standards.</p> <p>(3) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability skills and awareness and also to pass on their knowledge in future to their working colleagues and compatriots.</p> <p>(4) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.</p> <p>(5) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.</p> <p>(6) <u>Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.</u></p> <p><i>I cannot agree with or recommend the deletion of the clause regarding consent of the Engineer before demobilisation of foreign Operation Leaders, it is written for a purpose. It is sometimes difficult to get a contractor to assign any skilled foreign personnel on JICA projects in remote locations even when they are clearly necessary, for reasons of safety, quality and performance. Even when mobilised for example to comply with this clause, the contractor will have an incentive to demobilise such personnel as soon as he possibly can to optimise his profits rather than consider safety, etc.. I have recommended that some control is vital i.e. review and consent of the Engineer.</i></p> <p><i>Other clauses that have now been deleted were also necessary to add to the flavour of this sensitive clause.</i></p> <p><i>It now has little meaning or effect and basically a unscrupulous contractor will can now argue that the assignment of some foreign operation leaders and trainers for a short period complies with the requirements, his contract obligations are then all satisfied and having demobilised same persons, the employer is responsible for inadequacies beyond that point by not specifying more training.</i></p> <p><i>Please see above; the deletion of the other clause is not recommended. This training clause is an unusual requirement which is not compatible with the contract and it deserves full explanation as there is otherwise a risk that it will be misused in future.</i></p>
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<p>1.21.6 Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [<i>Contractor's Personnel</i>]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.</p> <p>NK: We think "for his consent" can be replaced with "for information" as written in Issue 6. See above notes, it really should be "consent"</p> <p>1.21.7 Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.</p> <p>1.22 Dangerous Work</p> <p>1.22.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.</p> <p>1.22.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.</p> <p>1.22.3 The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [<i>Permit System</i>] that is to be worn conspicuously and be available for validation by the Engineer.</p> <p>I have added the following because of apparent concerns over the meaning of JSSS 2.5.1.(3)</p> <p>1.22.4 The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.</p> <p>1.22.5 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.</p> <p>1.22.6 The Contractor shall select, train and equip a specialist rescue team or teams of selected workers at the Site, who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue.</p> <p>1.22.7 Rescue equipment shall include respiratory protective equipment for</p>	<p>1.21.2,1.21.3. Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [<i>Contractor's Personnel</i>]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.</p> <p>1.21.3,1.21.4. Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.</p> <p>1.22 Dangerous Work</p> <p>1.22.1. Particular care shall be taken by the Contractor when performing any Dangerous Work.</p> <p>1.22.2. Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.</p> <p>1.22.3. The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [<i>Permit System</i>] that is to be worn conspicuously and be available for validation by the Engineer.</p> <p>1.22.4. The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist (JC33) trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.</p> <p>JC33: specially ? NK5/6: To MD, Please check it.</p> <p>1.22.5. A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.</p> <p>1.22.6. The Contractor shall train and equip teams of selected workers at the Site <u>for emergency rescue operation in accordance with JSSS 1.24.6 and 1.24.7.</u> (JC34).</p> <p>JC34: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6. NK5/6: Will modify as commented. (JC35)NK: Harness is basically used now and belts is not, so deletion of belt is made.</p>	<p>1.21.3,1.21.4 Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [<i>Contractor's Personnel</i>]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his consent.</p> <p>1.21.4,1.21.5 Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.</p> <p>1.22 Dangerous Work</p> <p>1.22.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.</p> <p>1.22.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.</p> <p>1.22.3 The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [<i>Permit System</i>] that is to be worn conspicuously and be available for validation by the Engineer.</p> <p>1.22.4 The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist (JC33) trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.</p> <p>JC33: specially ? NK5/6: To MD, Please check it. Can also be "specially" if you prefer</p> <p>1.22.5 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.</p> <p>1.22.6 The Contractor shall train and equip teams of selected workers at the Site <u>for emergency rescue operation in accordance with JSSS 1.24.6 and 1.24.7.</u> (JC34).</p>
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<p>rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.</p> <p>NK: Harness is basically used now and belts is not, so deletion of belt is made.</p> <p>Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 2.</p> <p>The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works.</p> <p>1.22.8 The requirement for rescue teams and rescue equipment shall be as specified in the Particular Safety Specification.</p> <p>1.22.9 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.</p> <p>1.22.10 The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.</p> <p>1.22.11 Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.</p> <p>1.22.12 For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>].</p> <p>1.22.13 Hazardous Substances.</p> <p>(1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialist Subcontractor(s) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.</p> <p>(2) The Contractor shall obtain the Engineer's consent for such specialist Subcontractors and their detailed Safety Plans and Method Statements shall also be submitted to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].</p> <p>1.23 Permit to Work System</p> <p>1.23.1 The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.</p> <p>1.23.2 The system shall be designed to control safety for all types of high risk work likely to be encountered, including for example:</p> <p>(1) Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3 Example of Dangerous Work.</p>	<p>Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 2.</p> <p>The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works.</p> <p>JC35: Move to 1.24</p> <p>NK5/6: Will modify as commented.</p> <p>1.22.7. The requirement for rescue teams and rescue equipment shall be as specified in the Particular Safety Specification.</p> <p>1.22.8. (JC36). JC36: ditto NK5/6: Will modify as commented.</p> <p>1.22.9. The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.</p> <p>1.22.10. Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.</p> <p>1.22.11. For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>].</p> <p>1.22.12. Hazardous Substances.</p> <p>(1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists (JC37) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.</p> <p>JC37: not necessarily Subcontractors NK5/6: Will modify as commented.</p> <p>(2) The Contractor shall <u>submit</u> detailed Safety Plans and Method Statements <u>with respect to the removal and disposal of the Hazardous Substances</u> (JC38) to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].</p> <p>JC38: modified accordingly NK5/6: Will modify as commented.</p> <p>1.23 Permit to Work System</p> <p>1.23.1. The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.</p> <p>1.23.2. The system shall be designed to control safety for <u>Dangerous Work</u> (JC39) JC39: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work. NK5/6: Will modify as commented.</p>	<p>1.22.1. The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.</p> <p>1.22.2. Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.</p> <p>1.22.3. For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>].</p> <p>1.22.4. Hazardous Substances.</p> <p>(1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists (JC37) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.</p> <p>NK5/6: Will modify as commented. No problem</p> <p>(2) The Contractor shall <u>submit</u> detailed Safety Plans and Method Statements <u>with respect to the removal and disposal of the Hazardous Substances</u> (JC38) to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].</p> <p>NK5/6: Will modify as commented. No problem</p> <p>1.23 Permit to Work System</p> <p>1.23.1 The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.</p> <p>1.23.2 The system shall be designed to control safety for <u>Dangerous Work</u> (JC39)</p>
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~~There is no need to change this or give any examples, please refer to the definition of Dangerous Work in Annex 1.1. If you insist, change to “for example” as in the following subclause.~~

- ~~(2) Work in elevated positions, for example, transmission towers ladders and scaffolding, roof or ceiling work.~~
- ~~(3) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.~~
- ~~(4) Diving Works.~~

NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.

~~I believe that this will vary according to the actual project scope and I recommend to leave as it is. It is better to be left to the discretion of the HSO.~~

- 1.23.3 The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.
- 1.23.4 Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.
- 1.23.5 The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

~~1.24.1 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor’s Personnel and Employer’s Personnel and all other persons who are entitled to be on the Site.~~

NK-1: JICA commented to modify and add “so specified in the Specification” to 1.20.2 in Issue 6.

NK consider that “as specified in Particular Safety Specification” between “the Works,” and “the Contractor” if we follow JICA’s comment.

NK-2: JICA commented that they want to use “as specified in Particular Safety Specification” more than “unless otherwise specified in Particular Safety Specification” because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSSS)

Can you specify as JICA’s request to use “as specified in PSSS”?

- 1) I do not recommend any use or reliance on “as specified in PSSS”. If something is then not so mentioned in PSSS, (even when it should be), this means that there is no requirement stated.
- 2) “Unless otherwise specified” followed by stated requirements is the preferred and better method as the stated requirements in JSSS are then a default and even if nothing further is stated in PSSS, there will always be these requirements to rely on. This is a “failsafe” in JSSS production.
- 3) More importantly, it must be understood that the availability of these facilities is a total Contractor responsibility under FIDIC (Clause 6.7), under which the Contractor must provide such facilities, whether specified further by the Employer or not and the PSSS must not compromise this.

- 1.23.3. The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.
- 1.23.4. Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.
- 1.23.5. The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

1.24.1. (JC40)

JC40: Moved to 1.24.5.

NK5/6: Will modify as commented.

- 1.23.3 The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.
- 1.23.4 Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.
- 1.23.5 The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.

1.24 Accident Response Plan

1.24.1. (JC40)

NK5/6: Will modify as commented.

No comment

<p>4) The problem is that work in distant and remote places is a very common feature of JICA projects (such as hydro, water supply, power, irrigation etc.) and frequently proper health and safety facilities are just not made available by the Contractor at the Site at the expense of human life and safety. Often there are no local health authorities, or they are not equipped or not capable or they are too far away to be of any value. Very often contractors do not provide facilities to save money and health and safety suffers badly. This is fairly common practice and a common problem.</p> <p>5) The changes are suggested as a means of improving this situation and they should therefore be viewed against this background.</p> <p>NK-3: JICA want to clarify who “other persons who are entitled to be on the Site” are, and where “other places (if any) are.</p> <p>“other persons who are entitled to be on the Site” is from FIDIC (Clause 4.8 and others) and for whom the Contractor has responsibility for care, protection and safety. This is all-embracing and extends beyond Contractor’s Personnel and Employer’s Personnel to allow anyone who has a legal entitlement to be there (e.g. other contractor’s, residents, others who have a right of way through the site, families of site staff if formally living there and others). I have stated this so that the extent of contractor’s compliance with JSSS is clear and so that it does not diverge from the contract. I do not recommend that it is changed.</p> <p>“and any other places as may be specified in the Contract as forming part of the Site” comes from the definition of Site (GC 1.1.6.7) which I have already deleted throughout for clarity and for which will consider and may add an appropriate note in the User Guide.</p> <p>NK: 貴機構のご意見はいかがでしょうか？</p> <p>1.24.2 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.</p> <p>1.24.3 Unless otherwise specified in the Particular Safety Specification, medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor’s Personnel, the Employer’s Personnel and the family members of all other persons who are entitled to be on the Site.</p> <p>NK: JICA want to clarify where “other places (if any) are.</p> <p>Deleted see above</p> <p>1.24.4 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.</p> <p>1.24.5 Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example include:</p>	<p>1.24.1 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.</p> <p>1.24.2. (JC41) <u>Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge for the use of the Contractor’s Personnel, the Employer’s Personnel and the family members of all other persons who are entitled to be on the Site. (JC42) If so specified in the Particular Safety Specification, such medical services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.</u></p> <p>JC41: Free of charge for everyone” need not to be as default. I don’t believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor! If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.</p> <p>JC42: See comment to 1.2.2 (6).</p> <p>NK5/6: Will modify as commented.</p> <p>NK5/6: YH inquired if the sentence of “the family members of all other persons” is necessary to be deleted.</p> <p>1.24.3. The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.</p> <p>1.24.4. <u>The Contractor shall provide the following medical and first aid facilities:</u></p> <p>(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.</p>	<p>1.24.1 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.</p> <p>1.24.2 (JC41) <u>Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge for the use of the Contractor’s Personnel, the Employer’s Personnel and the family members of all other persons who are entitled to be on the Site. (JC42) If so specified in the Particular Safety Specification, such medical services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.</u></p> <p>NK5/6: Will modify as commented.</p> <p>NK5/6: YH inquired if the sentence of “the family members of all other persons” is necessary to be deleted.</p> <p><i>Yes, this applies only to remote sites as described originally in 1.24.1.</i></p> <p><i>As 1.24.1 is moved then maybe this needs to be moved also or it needs editing, “such medical services” is not then correct</i></p> <p><i>I had originally tried always to use the expression “Unless otherwise specified in the Particular Safety Specification” so what is written in JSSS is a safe default and the risk of error is therefore reduced. This has now been changed here and in 1.36 so reliance is now placed upon the PSS which I had tried to avoid.</i></p> <p>1.24.3 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.</p> <p>1.24.4 <u>The Contractor shall provide the following medical and first aid facilities:</u></p>
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<p>(1) Medical staff to be assigned at the Site.</p> <p>(2) Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.</p> <p>(3) Emergency <u>medivac</u> services where necessary.</p> <p>NK: We feel that the provision of medivac services seems excessive unless health insurance can cover it.</p> <p>I disagree if it means saving a life. Whether health insurance covers it or not is irrelevant. There will be situations where it is available and necessary to save life, so can JICA say that fatality is acceptable as the alternative was too expensive?</p> <p>(4) Medical Facilities on the Site together with description of equipment and consumables.</p> <p>(5) Temporary water and power supply to maintain use during mains supply failure.</p> <p>(6) Type of communication facilities and measures for emergency response.</p> <p>(7) Deployment of appropriate first aid appliances, aids, instruments and medicines.</p> <p>(8) First aid training, appointment of first aiders and dissemination of information.</p>	<p>(2) First aid training, appointment of first aiders and dissemination of information.</p> <p>(3) Type of communication facilities and measures for emergency response.</p> <p>(4) Medical Facilities on the Site together with description of equipment and consumables.</p> <p>(5) Temporary water and power supply to maintain use during mains supply failure.</p> <p>(6) <u>Transportation facilities</u> to be provided to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.</p> <p>(6)(7) <u>Additional facilities specified in the Particular Safety Specification, if any.</u></p> <p>JC43: Where the Site is located in a large distance from a sufficiently equipped hospital.</p> <p>NK5/6: Will modify as commented.</p> <p>(7)(8) <u>Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.(JC44)</u></p> <p>JC44: See comment to 1.2.2 (6)</p> <p>NK5/6: Will modify as commented.</p>	<p><u>(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.</u></p> <p><u>(2) First aid training, appointment of first aiders and dissemination of information.</u></p> <p><u>(3) Type of communication facilities and measures for emergency response.</u></p> <p><u>(4) Medical Facilities on the Site together with description of equipment and consumables.</u></p> <p><u>(5) Temporary water and power supply to maintain use during mains supply failure.</u></p> <p><u>(6) Transportation facilities</u> to be provided to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.</p> <p>(3)(7) <u>Additional facilities specified in the Particular Safety Specification, if any.</u></p> <p>NK5/6: Will modify as commented.</p> <p>Your above added clause 1.24.5 is not correct contractually, is not necessary and I do not recommend that it is included, please refer to notes under 1.24.6 below.</p> <p>(4)(8) <u>Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.(JC44)</u></p> <p>NK5/6: Will modify as commented.</p> <p>I do not recommend that your suggested changes are made.</p> <p>Please refer to GC 6.7 [Health and safety] which in terms of Contractor's basic H and S obligations, should apply and prevail. This is why I had carefully worded this clause and stated "to comply with his obligations under the Contract".</p> <p>By changing this to "as specified in the Particular Safety Specification" will change the basic requirements of the Contract and should not be done. Ignoring ambiguity and priorities, whatever is stated in the PSS (unless exactly the same as GC 6.7) will unnecessarily and incorrectly change the contract.</p> <p>Similarly, it is not necessary to define or restrict the services and facilities to be provided as has been attempted in your added 1.24.5 above. I do not recommend that your clause is added meaning that the general requirements of GC 6.7 continue to apply.</p> <p>The added clause 1.24.5 is not correct anyway as for example "ambulance service" which you have deleted is a requirement of the contract anyway.</p> <p>To assist the Contractor with his Bid, I had suggested that the Employer/consultant may wish to assist the Contractor by stating actual site requirements in the PSS but not amending the basic requirements of the contract in the process .</p> <p>On balance I do not see why any real change is necessary to this clause and what is suggested is confusing rather than improving.</p>
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<p>1.24.6 Where the Works include the following for example, the Contractor shall train selected Contractor's Personnel to perform rescue operations in a safe manner in the event of any accident:</p> <p>(1) Work on or near existing electrical equipment, cables, wiring, services and systems.</p> <p>(2) Dangerous Work such as Confine Spaces, work at height.</p> <p>NK: We consider describing example as above.</p> <p>Please see above notes and Annex 1.1 Definitions. I do not agree that any such examples are necessary</p> <p>(3) Diving Work.</p> <p>(4) Similar special circumstances.</p> <p>1.24.7 All rescue team members in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].</p> <p>1.24.8 Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].</p> <p>NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.</p> <p>Better to delete reference here "as recommended by OSHA" and include your clear requirements in JSSS 2.9 [PP and First Aid].</p> <p>1.25 Measures at the Time Accidents Occur</p> <p>1.25.1 When an accident occurs, the HSO the Contractor shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:</p> <p>NK: JICA added in the last comment.</p> <p>NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6.</p> <p>I disagree completely and do not recommend this (or any such) change . As I have explained repeatedly, the HSO must have this authority in order to fulfil his safety control</p>	<p>1.24.5. <u>The Contractor shall train selected Contractor's Personnel to perform emergency rescue in a safe manner in the event of any accident. Workers so trained (JC45) are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.</u></p> <p>JC45: Merged with 1.22.6</p> <p>NK5/6: Will modify as commented.</p> <p>(10) (JC46)</p> <p>JC46: Diving work is also Dangerous Work</p> <p>NK5/6: We cannot understand how to this comment (JC46). To MD, please review this comment.</p> <p>1.24.6. <u>Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC47)</u></p> <p>JC47: Move from 1.22.</p> <p>This should be "may" since the nature of Works may vary?</p> <p>NK5/6: To MD, please review this comment.</p> <p>1.24.7. <u>If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC48)</u></p> <p>JC48: Move from 1.22.</p> <p>NK5/6: Will modify as commented.</p> <p>1.24.8. <u>Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].</u></p> <p>1.24.9. Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].</p> <p>NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid.</p> <p>Better to delete reference here "as recommended by OSHA" and include your clear requirements in JSSS 2.9 [PP and First Aid]. (JC49)</p> <p>JC49: Agree.</p> <p>NK5/6: Will modify as agreed.</p> <p>1.25 Measures at the Time Accidents Occur</p> <p>1.25.1 When an accident occurs, the Contractor shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:</p> <p>NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6. (JC50)</p> <p>I disagree completely and do not recommend this (or any such) change . As I have explained repeatedly, the HSO must have this authority in order to fulfil his safety control functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible.</p>	<p>1.24.2. The Contractor shall train selected Contractor's Personnel to perform emergency rescue in a safe manner in the event of any accident. Workers so trained (JC45) are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.</p> <p>1.24.3. <u>Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC47)</u></p> <p>NK5/6: To MD, please review this comment.</p> <p><i>It should be "shall", because where the nature of the Works so dictates, it "shall" be provided not "may" otherwise compliance appears optional, which is not the intention.</i></p> <p>1.24.4. <u>If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC48)</u></p> <p>1.24.5. <u>Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].</u></p> <p>1.24.6. Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].</p> <p>NK5/6: Will modify as agreed.</p> <p><i>No comment</i></p> <p>1.25 Measures at the Time Accidents Occur</p> <p>1.25.1 When an accident occurs, the Contractor shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:</p> <p>NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6. (JC50)</p> <p>NK5/6: Will modify as agreed.</p> <p><i>For the purposes of safety, the HSO must immediately take this action when he is aware of it and this should remain as his duty, not the contractor as you suggest. The interests are different and if immediate action by HSO is not taken, it should be the HSO that is</i></p>
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<p>functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible.</p> <p>NK: 貴機構のご意見はいかがでしょうか</p> <p>(1) Safely locate and extract casualties.</p> <p>(2) Provide first aid treatment at the Site.</p> <p>(3) Implement Secondary accident prevention activities, including:</p> <p>(a) Preserving the accident site, make safe and prevent anyone interfering or entering;</p> <p>(b) Discontinuing construction work related to or in the vicinity of the accident; and</p> <p>(c) Implementing any further measures instructed by the Engineer.</p> <p>1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.</p> <p>(1) The Contractor shall inform the Engineer and submit details of any accident.</p> <p>(2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.</p> <p>(3) The Accident Report shall include details of the HSO's the Contractor's recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].</p> <p>Please see above notes on this subject. This should remain as the HSO, I disagree and do not recommend this (or any such) change.</p> <p>1.25.3 For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].</p> <p>1.26 Emergency Response Plan</p> <p>1.26.1 <u>To the extent reasonably possible</u>, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and as far as reasonably possible, shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.</p> <p>The Contractor shall the take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have reasonably avoided or overcome or lessened the effects.</p> <p>NK-1: Can we delete one of two "reasonably possible" above?</p> <p>Yes, delete as above</p> <p>NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).</p> <p>With the changes to your draft that have now been agreed, I have already modified JSS</p>	<p>JC50: Agree.</p> <p>NK5/6: Will modify as agreed.</p> <p>(1) Safely locate and extract casualties.</p> <p>(2) Provide first aid treatment at the Site.</p> <p>(3) Implement Secondary accident prevention activities, including:</p> <p>(a) Preserving the accident site, make safe and prevent anyone interfering or entering;</p> <p>(b) Discontinuing construction work related to or in the vicinity of the accident; and</p> <p>(c) Implementing any further measures instructed by the Engineer.</p> <p>1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.</p> <p>(1) The Contractor shall inform the Engineer and submit details of any accident.</p> <p>(2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.</p> <p>(3) The Accident Report shall include details of the HSO's the Contractor's recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].</p> <p>1.25.3 For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].</p> <p>1.26 Emergency Response Plan</p> <p>1.26.1 <u>To the extent reasonably possible</u>, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.</p> <p>The Contractor shall the take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, <u>and to avoid</u>, overcome or lessened the effects <u>to a reasonable extent</u>. (JC51)</p> <p>JC51: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering into contract" or not.</p> <p>NK5/6: Will modify as commented.</p>	<p><i>held responsible.</i></p> <p>(1) Safely locate and extract casualties.</p> <p>(2) Provide first aid treatment at the Site.</p> <p>(3) Implement Secondary accident prevention activities, including:</p> <p>(a) Preserving the accident site, make safe and prevent anyone interfering or entering;</p> <p>(b) Discontinuing construction work related to or in the vicinity of the accident; and</p> <p>(c) Implementing any further measures instructed by the Engineer.</p> <p>1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.</p> <p>(1) The Contractor shall inform the Engineer and submit details of any accident.</p> <p>(2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.</p> <p>(3) The Accident Report shall include details of the Contractor's recommended counter-measures to prevent any reoccurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].</p> <p>1.25.3 For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].</p> <p>1.26 Emergency Response Plan</p> <p>1.26.1 To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.</p> <p>The Contractor shall take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, <u>and to avoid</u>, overcome or lessened the effects <u>to a reasonable extent</u>. (JC51)</p> <p>NK5/6: Will modify as commented.</p> <p><i>I give no further comment</i></p>
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2.7 and I thought that the above can now be deleted as shown, however your later comments against 1.26.5 are confusing me greatly and I am unsure. Can you please answer my request against 1.26.5 first and I can then modify the above if necessary.

1.26.2 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

It is perfectly correct as it is however have split it .

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.26.3 Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage and flooding arising from such flooding, earthquake or volcanic activity.

NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.

Yes this can be changed as above

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and to any third parties and neighbours and property not connected with the Works but potentially affected thereby.
- (2) Provision of temporary support to all sides and soffits of excavations or portal-of tunnelling of sufficient strength, durability and suitability.

1.26.2 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?

It is perfectly correct as it is however have split it . (JC52)

JC52: Thank you for being non-native friendly. FIDIC 1999 and MDB version have been supported worldwide because of its "understandability". Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

NK5/6: No comment.

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

1.26.3 Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage from such flooding, earthquake or volcanic activity.

Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and (JC53) to any third parties and neighbours and property not connected with the Works but potentially affected thereby.

JC53: See 1.2.2 (6).

NK5/6: Will modify as commented.

- (2) Provision of temporary support to all sides and soffits of excavations or portal-of portal-of (JC54) tunnelling of sufficient strength, durability and suitability.

JC54: Better to add.

1.26.2 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:

- (1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.
- (2) The safety and stability of the Works and Goods.
- (3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.

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Such measures to be implemented shall include:

- (1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and (JC53) to any third parties and neighbours and property not connected with the Works but potentially affected thereby.

NK5/6: Will modify as commented.

No comment

- (2) Provision of temporary support to all sides and soffits of excavations or portal of (JC54) tunnelling of sufficient strength, durability and suitability.

JC54: Better to add.

<p>NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel.</p> <p>My recommendation is still (as written) to leave it as it was and make this as wide a term as possible to increase the coverage. There is no acceptable definition of "portal" and this change just introduces argument on interpretation, why change?</p> <p>NK: We accept to leave as it is</p> <p>(3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.</p> <p>1.26.4 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [<i>Contractor's General Obligations</i>] and JSSS 1.9 [<i>Contractor's Method Statements</i>].</p> <p>1.26.5 Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.</p> <p>This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract.</p> <p>NK: We consider that the Contractor may have difficulty to assume what activities can be made. We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.</p> <p>Which underlining? In 1.26.1?</p> <p>Please see 1.26.6 for my assumption of your requirements.</p> <p>Your draft has never been clear to me and I am still having difficulty to understand what your draft means and what are your intentions and requirements.</p> <p>Please note:</p> <ol style="list-style-type: none"> 1) The Contractor can only plan for what he can reasonably foresee or anticipate and 2) It is necessary to state this so that no confusion is introduced with FIDIC GC 19. 3) This only leaves simple search and contact activities which has little or no meaning. <p>JSSS cannot specify what other measures the Contractor is to take after a Force majeure event (which I guess your emergency plan is trying to cover) as these events and any counter measures cannot be predicted.</p> <p>Please can you clarify exactly what you are requiring the Contractor to do in the event of an earthquake, hurricane, typhoon or volcanic activity, so I can finalise this clause and also JSSS 2.7.</p> <p>NK: 1.26.5 はさらに検討すべきかと考えておりますが、とりあえずこのままで提出致します。貴機構のご意見がありましたらご教示願います。</p>	<p>NK5/6: Will modify as commented.</p> <p>(3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.</p> <p>1.26.4 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [<i>Contractor's General Obligations</i>] and JSSS 1.9 [<i>Contractor's Method Statements</i>].</p> <p>1.26.5 Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.</p> <p>(JC55)NK: We consider that the Contractor may have difficulty to assume what activities can be made. JC55: Better to jump to 1.26.6 without this. NK5/6: Will modify as commented.</p>	<p>NK5/6: Will modify as commented.</p> <p>No comment</p> <p>(3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.</p> <p>1.26.4 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [<i>Contractor's General Obligations</i>] and JSSS 1.9 [<i>Contractor's Method Statements</i>].</p> <p>1.26.5 Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.</p> <p>NK5/6: Will modify as commented. No further comment</p>
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<p>1.26.6 The Emergency Response Plan, shall cover:</p> <ol style="list-style-type: none"> (1) Evacuation plan, showing evacuation routes and assembly points. (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency. (3) Emergency contact system. (4) Use of existing and available medical and other related facilities. (5) Emergency stocks of bottled water, lights, ropes, shovels. <p>The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.</p> <p>1.26.7 The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.</p> <p>The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.</p> <p>The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.</p> <p>The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:</p> <ol style="list-style-type: none"> (1) Employer's Personnel at the Site and also at their respective head office where different. (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like. (3) Contractor's Personnel at the Site and also at the head office where different. (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different. <p>1.26.8 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.</p> <p>Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on <u>the Site</u>.</p> <p>Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.</p> <p>1.26.9 If and when an emergency occurs, the Contractor shall share necessary</p>	<p>1.26.6 The Emergency Response Plan, shall cover:</p> <ol style="list-style-type: none"> (1) Evacuation plan, showing evacuation routes and assembly points. (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency. (3) Emergency contact system. (4) Use of existing and available medical and other related facilities. (5) Emergency stocks of bottled water, lights, ropes, shovels. <p>The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. 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(2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like. (3) Contractor's Personnel at the Site and also at the head office where different. (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different. <p>1.26.8 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.</p> <p>Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site. (JC56)</p> <p>JC56: See 1.2.2(6).</p> <p>NK5/6: To Md, please review this comment.</p> <p>Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.</p> <p>1.26.9 If and when an emergency occurs, the Contractor shall share necessary</p>	<p>1.26.6 The Emergency Response Plan, shall cover:</p> <ol style="list-style-type: none"> (1) Evacuation plan, showing evacuation routes and assembly points. (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency. (3) Emergency contact system. (4) Use of existing and available medical and other related facilities. 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(2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like. (3) Contractor's Personnel at the Site and also at the head office where different. (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different. <p>1.26.8 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.</p> <p>NK5/6: To Md, please review this comment.</p> <p>This is connected with the provision of health and safety measures as referred to in 1.2.2 (6) and can be deleted to be compatible.</p> <p>Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.</p> <p>1.26.9 If and when an emergency occurs, the Contractor shall share necessary</p>
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<p>information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.</p> <p>1.26.10 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.</p> <p>1.26.11 For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].</p> <p>1.27 Contractor's Safety Committee and Regular Safety Meetings</p> <p>1.27.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.</p> <p>1.27.2 Members of the Contractor's Safety Committee shall include:</p> <ol style="list-style-type: none"> (1) Contractor's Representative. (2) HSO. (3) Medical and first aid staff. (4) Contractor's senior site staff. (5) Contractor's head office safety manager (as necessary). (6) Subcontractors' representatives, health and safety personnel, site staff. (7) Representative of Contractor's Personnel. (8) (If necessary) Representatives of the relevant government authorities and agencies. (9) Any other necessary personnel. <p>1.27.3 The HSO shall be the chairman of the Safety Committee.</p> <p>1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:</p> <ol style="list-style-type: none"> (1) Frequency of the meetings: At least once a month. (2) Agenda: <ol style="list-style-type: none"> (a) Hazards, safety and health problems identified by any members of the Safety Committee; (b) Monthly or weekly schedule of important health and safety matters; (c) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence; (d) Feedback on the regular safety, coordination and other meetings with the Engineer; (e) Safety instructions received from the Engineer; <p><i>NK: Are the phrases in red to be added?</i></p> <p><i>Is this sort of comment really necessary? Yes it can be changed but this is only an abbreviated sample agenda.</i></p>	<p>information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.</p> <p>1.26.10 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.</p> <p>1.26.11 For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].</p> <p>1.27 Contractor's Safety Committee and Regular Safety Meetings</p> <p>1.27.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.</p> <p>1.27.2 Members of the Contractor's Safety Committee shall include:</p> <ol style="list-style-type: none"> (1) Contractor's Representative. (2) HSO. (3) Medical and first aid staff. (4) Contractor's senior site staff. (5) Contractor's head office safety manager (as necessary). (6) Subcontractors' representatives, health and safety personnel, site staff. (7) Representative of labour union, if any. (8) (If necessary) Representatives of the relevant government authorities and agencies. (9) Any other necessary personnel. <p>1.27.3 The HSO shall be the chairman of the Safety Committee.</p> <p>1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:</p> <ol style="list-style-type: none"> (1) Frequency of the meetings: At least once a month. (2) Agenda: <ol style="list-style-type: none"> (a) Hazards, safety and health problems identified by any members of the Safety Committee; (b) Monthly or weekly schedule of important health and safety matters; (c) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence; (d) Feedback on the regular safety, coordination and other meetings with the Engineer; (e) Safety instructions received from the Engineer; (f) Items to be coordinated with police, fire department and other related organisations; (g) Compliance and registration requirements under the Laws of the 	<p>information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.</p> <p>1.26.10 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.</p> <p>1.26.11 For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].</p> <p>1.27 Contractor's Safety Committee and Regular Safety Meetings</p> <p>1.27.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.</p> <p>1.27.2 Members of the Contractor's Safety Committee shall include:</p> <ol style="list-style-type: none"> (1) Contractor's Representative. (2) HSO. (3) Medical and first aid staff. (4) Contractor's senior site staff. (5) Contractor's head office safety manager (as necessary). (6) Subcontractors' representatives, health and safety personnel, site staff. (7) Representative of labour union, if any. (8) (If necessary) Representatives of the relevant government authorities and agencies. (9) Any other necessary personnel. <p>1.27.3 The HSO shall be the chairman of the Safety Committee.</p> <p>1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:</p> <ol style="list-style-type: none"> (1) Frequency of the meetings: At least once a month. (2) Agenda: <ol style="list-style-type: none"> (a) Hazards, safety and health problems identified by any members of the Safety Committee; (b) Monthly or weekly schedule of important health and safety matters; (c) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence; (d) Feedback on the regular safety, coordination and other meetings with the Engineer; (e) Safety instructions received from the Engineer; (f) Items to be coordinated with police, fire department and other related organisations; (g) Compliance and registration requirements under the Laws of the
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<p>(f) Items to be coordinated with police, fire department and other related organisations;</p> <p>(g) Compliance and registration requirements under the Laws of the Country;</p> <p>(h) Safety and health awards, media attention and the like; and</p> <p>(i) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(j) Other matters.</p> <p>NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion.</p> <p>Again, is this sort of comment really necessary? I have changed this</p> <p>1.27.5 Report on the Safety Committee Meetings</p> <p>The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.</p> <p>1.28 Engineer's Regular Safety Meetings</p> <p>1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:</p> <p>(1) Frequency of the meetings: Once a month.</p> <p>(2) Agenda:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(b) Monthly or weekly schedule of important health and safety matters;</p> <p>(c) Accidents, fatalities, injuries in the previous month and measures to be taken to prevent any reoccurrence;</p> <p>NK: Are the phrases in red to be added?</p> <p>Ditto above</p> <p>Is the sequence here acceptable or shall it change as above?</p> <p>(d) Hazards, safety and health problems identified by any members of the Safety Committee;</p> <p>(e) Status of resolution of previous problems;</p> <p>(f) Items to be coordinated with police, fire department and other related organisations;</p> <p>(g) Compliance and registration requirements under the Laws of the Country; and</p> <p>(h) Safety and health awards, media attention and the like.</p>	<p>Country;</p> <p>(h) Safety and health awards, media attention and the like; and</p> <p>(i) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(j) Other matters.</p> <p>1.27.5 Report on the Safety Committee Meetings</p> <p>The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.</p> <p>1.28 Engineer's Regular Safety Meetings</p> <p>1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. 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<p>1.28.2 Report on the Engineer's Regular Safety Meetings:</p> <ol style="list-style-type: none"> (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above. (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings. (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer. (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract. (5) The Engineer shall issue a formal instruction for any variation requests. <p>1.29 Project Safety Committee</p> <p>1.29.1 On larger Projects with multiple contract packages and contractors and unless otherwise stated in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.</p> <p>1.29.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:</p> <ol style="list-style-type: none"> (1) The Employer. (2) The Engineer(s). (3) The Contractor's Representative(s). (4) Health and Safety Officers of all members. <p>1.29.3 The Chairman of the Safety Committee shall be the Employer.</p> <p>1.29.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.</p> <p>NK: JICA commented to delete this as holding meetings are not monthly basis but optional. <i>We propose "periodically as requested by the Employer" and ask you to reply to this comment as reply is not mentioned in the document with notes.</i></p> <p>Please clarify what you want to be deleted.</p> <p>NK: Deletion is "on monthly basis".</p> <p>1.29.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.</p> <p>NK: JICA commented to replace "shall" with "may" in Clauses 1.29.3 to 1.29.5. <i>We want to ask you to reply to this comment as reply is not mentioned in the document with notes.</i></p> <p>Please note that I have already edited the first paragraph to state "unless otherwise specified."</p> <p>With this change I think that no other change is necessary.</p> <p>NK: MD 氏の回答をご参照願います。</p>	<p>1.28.2 Report on the Engineer's Regular Safety Meetings:</p> <ol style="list-style-type: none"> (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above. 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1.30 Health and Safety Coordination with Other Contractors

NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer.
We propose to move them to the User Guide.

I disagree, this affects the Contractor also and it is important that it is stated here so that there is common and very clear legal agreement between Employer and Contractor on who does what.

I think that this requires mention in both JSSS and the User Guide to avoid future dispute.

Please also note my understanding that the User Guide is not a part of the Contract and please let me know if you require differently.

NK: MD 氏の回答をご参照願います。

1.30.1 Refer to GC 2.3 [Employer's Personnel] and GC 4.6 [Co-operation] regarding the respective obligations and requirements for the Contractor regarding cooperation with:

- (1) the Employer's Personnel,
- (2) any other contractors employed by the Employer,
- (3) the personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [Safety Procedures] and GC 4.18 [Protection of the Environment].

The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.

When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.

When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.

1.30.2 The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.

1.30.3 If any other contractors are employed by the Employer or if any legally

1.30 Health and Safety Coordination with Other Contractors

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1.30.3 If any other contractors are employed by the Employer or if any legally constituted public authorities responsible to the Employer is working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:

- (1) Frequency of the meetings: as and when considered necessary by Engineer.
- (2) Unless otherwise agreed, attendees shall include representatives of:

1.30 Health and Safety Coordination with Other Contractors

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- (3) the personnel of any relevant authorities legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.

I have now given definition to "relevant authorities" and therefore suggest the above correction

In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [Safety Procedures] and GC 4.18 [Protection of the Environment].

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<p>constituted public authorities responsible to the Employer is working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:</p> <p>(1) Frequency of the meetings: as and when considered necessary by Engineer.</p> <p>(2) Unless otherwise agreed, attendees shall include representatives of:</p> <p>(a) The Employer;</p> <p>(b) The Contractor;</p> <p>(c) Other contractors employed by the Employer; and</p> <p>(d) Personnel of any legally constituted public authorities.</p> <p>NK: We considers it is easy to understand attendee by adding "who may be employed in the execution on or near the Site of any work not included in the Contract." to (d) though it mentioned in the first sentence.</p> <p>I don't understand your comment, please advise what change you require (本 Q&A は無視願います。)</p> <p>(3) Agenda should relate to coordination among different contractors including for example:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;</p> <p>(c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence;</p> <p>(d) Status of resolution of previous problems;</p> <p>(e) Items to be coordinated with police, fire department and other related organisations;</p> <p>(f) Compliance and registration requirements under the Laws of the Country;</p> <p>(g) Safety and health awards, media attention and the like; and</p> <p>(h) Other matters.</p> <p>1.30.4 Report on the Health and Safety Coordination Meetings:</p> <p>(1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>(2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.</p> <p>(3) A further copy shall be included in the Engineer's monthly progress report.</p>	<p>(a) The Employer;</p> <p>(b) The Contractor;</p> <p>(c) Other contractors employed by the Employer; and</p> <p>(d) Personnel of any legally constituted public authorities.</p> <p>(3) Agenda should relate to coordination among different contractors including for example:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;</p> <p>(c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence;</p> <p>(d) Status of resolution of previous problems;</p> <p>(e) Items to be coordinated with police, fire department and other related organisations;</p> <p>(f) Compliance and registration requirements under the Laws of the Country;</p> <p>(g) Safety and health awards, media attention and the like; and</p> <p>(h) Other matters.</p> <p>1.30.4 Report on the Health and Safety Coordination Meetings:</p> <p>(1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>(2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.</p> <p>(3) A further copy shall be included in the monthly progress report. (JC57)</p> <p>JC57: Engineer's monthly progress report is normally not shared with the Contractor. Delete "Engineer's" to mean Contractor's progress report.</p> <p>NK5/6: Will modify as commented..</p>	<p>(b) The Contractor;</p> <p>(c) Other contractors employed by the Employer; and</p> <p>(d) Personnel of any relevant authorities legally constituted public authorities.</p> <p>I have now given definition to "relevant authorities" and therefore suggest the above correction</p> <p>(3) Agenda should relate to coordination among different contractors including for example:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any relevant authorities any legally constituted public authorities;</p> <p>I have now given definition to "relevant authorities" and therefore suggest the above correction</p> <p>(c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence;</p> <p>(d) Status of resolution of previous problems;</p> <p>(e) Items to be coordinated with police, fire department and other related organisations;</p> <p>(f) Compliance and registration requirements under the Laws of the Country;</p> <p>(g) Safety and health awards, media attention and the like; and</p> <p>(h) Other matters.</p> <p>1.30.4 Report on the Health and Safety Coordination Meetings:</p> <p>(4) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>(5) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.</p> <p>(6) A further copy shall be included in the monthly progress report. 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<p>1.31 Safety Statistics</p> <p>1.31.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.</p> <p>1.31.2 Actual statistics shall include the following:</p> <ol style="list-style-type: none"> (1) Accident: description, casualties, location, time, type and cause. (2) Near-miss: description, casualties, location, time, type and cause. (3) Lost-time: lost hours of casualties, duration of discontinuation. (4) Remedial measures taken. (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate. (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes. (7) Record of reports as may be required by government authorities. (8) Number of health and safety staff. (9) Number of Contractor's safety meetings and frequency. (10) Number of candidates given safety induction and other training. <p>NK: Are "candidates" replaced with "Contractor's Personnel"?</p> <p>No, they are all candidates for training and can include others e.g. Employer's Personnel and others, etc.</p> <ol style="list-style-type: none"> (11) Number of safety inspections, (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment. (13) Instructions issued for unsafe behaviour or unsafe site conditions. (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE. (15) Engineer's Instructions issued for work suspension. (16) HSO instructions issued for work stoppage. (17) Others. <p>1.31.3 All data shall be in a format and content given consent by the Engineer.</p> <p>1.31.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.</p> <p>1.31.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [<i>Safety Reports</i>].</p> <p>1.32 Safety Reports</p> <p>1.32.1. The Contractor shall provide regular safety reports to the</p>	<p>1.31 Safety Statistics</p> <p>1.31.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.</p> <p>1.31.2 Actual statistics shall include the following:</p> <ol style="list-style-type: none"> (1) Accident: description, casualties, location, time, type and cause. (2) Near-miss: description, location, time, type and cause. (3) Lost-time: lost hours of casualties, duration of discontinuation. (4) Remedial measures taken. (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate. (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes. 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By doing this, things will be streamlined : "statistics → records → their reporting"</p> <p>NK5/6: Will modify as commented.</p> <p>1.31.3 All data shall be in a format and content given consent by the Engineer.</p> <p>1.31.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.</p> <p>1.31.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [<i>Safety Reports</i>].</p> <p>1.32 Safety Reports</p> <p>1.32.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of</p>	<p>1.31 Safety Statistics</p> <p>1.31.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.</p> <p>1.31.2 Actual statistics shall include the following:</p> <ol style="list-style-type: none"> (1) Accident: description, casualties, location, time, type and cause. 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<p>Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:</p> <p>(1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.</p> <p>NK Is it necessary to add "for"?</p> <p>Yes, it can be</p> <p>(1) Contractor/HSO and Joint Site Safety Inspections.</p> <p>(2) Weekly Safety Report: summary of safety matters of the week.</p> <p>(3) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [Progress Reports].</p> <p>1.33 Health and Safety Records</p> <p>1.33.1. The Contractor shall keep health and safety records for the following:</p> <p>(1) Accidents, fatalities, near-misses.</p> <p>(2) Inspection records and checklists.</p> <p>(3) Meetings for safety and health management.</p> <p>(4) Monitoring of safety and health management activities.</p> <p>(5) Health and safety education and training for the Contractor's Personnel.</p> <p>(6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.</p> <p>(7) Work environment records and other records required by JSSS Chapter 2 [General Safety Measures] and other parts of JSSS.</p> <p>1.33.2. All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.33.3. A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].</p> <p>1.34 Health and Safety Incentive Schemes</p> <p>1.34.1. The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.</p> <p>NK: May we know if the word of "legitimate" (conforming to the law or to rules) is necessary?(対応済み)</p>	<p>health and safety. Reports shall include:</p> <p>(1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.</p> <p>(2) Contractor/HSO and Joint Site Safety Inspections.(JC59)</p> <p>JC59:Joint Site Safety Inspection Report ?</p> <p>NK5/6: Will modify as commented.</p> <p>(3) Weekly Safety Report: summary of safety matters of the week.</p> <p>(4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [Progress Reports].</p> <p>1.33 Health and Safety Records</p> <p>1.33.1 The Contractor shall keep health and safety records for the following:</p> <p>(1) Accidents, fatalities, near-misses.</p> <p>(2) Inspection records and checklists.</p> <p>(3) Meetings for safety and health management.</p> <p>(4) Monitoring of safety and health management activities.</p> <p>(5) Health and safety education and training for the Contractor's Personnel.</p> <p>(6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.</p> <p>(7) Work environment records and other records required by JSSS Chapter 2 [General Safety Measures] and other parts of JSSS.</p> <p>1.33.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.33.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].</p> <p>1.34 Health and Safety Incentive Schemes</p> <p>1.34.1 The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.</p> <p>1.34.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.</p>	<p>him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:</p> <p>(1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.</p> <p>(2) Contractor/HSO and Joint Site Safety Inspections.(JC59)</p> <p>(3) Weekly Safety Report: summary of safety matters of the week.</p> <p>(4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [Progress Reports].</p> <p>1.33 Health and Safety Records</p> <p>1.33.1 The Contractor shall keep health and safety records for the following:</p> <p>(1) Accidents, fatalities, near-misses.</p> <p>(2) Inspection records and checklists.</p> <p>(3) Meetings for safety and health management.</p> <p>(4) Monitoring of safety and health management activities.</p> <p>(5) Health and safety education and training for the Contractor's Personnel.</p> <p>(6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.</p> <p>(7) Work environment records and other records required by JSSS Chapter 2 [General Safety Measures] and other parts of JSSS.</p> <p>1.33.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.33.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].</p> <p>1.34 Health and Safety Incentive Schemes</p> <p>1.34.1 The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.</p> <p>1.34.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.</p>
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<p><i>We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.</i></p> <p>Deleted see above.</p> <p>1.34.2. It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.</p> <p>1.34.3. It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.</p> <p>1.34.4. Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.</p> <p>1.34.5. Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.</p> <p>1.34.6. The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.</p> <p>1.34.7. As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.</p> <p>1.34.8. The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [<i>Safety Reports</i>].</p>	<p>1.34.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.</p> <p>1.34.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.</p> <p>1.34.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.</p> <p>1.34.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.</p> <p>1.34.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.</p> <p>1.34.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [<i>Safety Reports</i>].</p>	<p>1.34.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.</p> <p>1.34.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.</p> <p>1.34.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.</p> <p>1.34.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.</p> <p>1.34.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.</p> <p>1.34.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [<i>Safety Reports</i>].</p>
<p>1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE</p> <p>1.35.1. Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.</p> <p>All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.</p>	<p>1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE</p> <p>1.35.1 Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.</p> <p>All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.</p>	<p>1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE</p> <p>1.35.1 Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.</p> <p>All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.</p>

<p>1.35.2. The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO for his delegated and technically qualified assistant at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.</p> <p>NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system. We want to ask you to modify the 1.35.2 as the above.</p> <p>As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 [Supporting Staff] where this is explained.</p> <p>I do not recommend your suggested change.</p> <p>If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.</p> <p>1.35.3. The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor.</p> <p>If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.</p> <p>1.35.4. As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:</p> <p>(1) New and up to date Personal Protective Equipment (PPE) and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.</p> <p>(2) New or recent Contractor's Equipment and Temporary Works, not more than five (5) years old upon the date that it is mobilised to the Site, all suitable and fit for the purpose for which it is intended, in</p>	<p>1.35.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected <u>by the HSO (JC60)</u> at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.</p> <p>NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system. We want to ask you to modify the 1.35.2 as the above.</p> <p>As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 [Supporting Staff] where this is explained.</p> <p>I do not recommend your suggested change. JC60: Agree with MD NK5/6: Will modify as commented.</p> <p>If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.</p> <p>1.35.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. <u>The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.</u></p> <p>If, as a result, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.</p> <p>1.35.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:</p> <p>(1) New and up to date Personal Protective Equipment (PPE) and <u>other safety equipment</u> <u>(JC61)</u> of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.</p> <p>JC61: Temporary Works is covered in (2). NK5/6: Will modify as commented.</p>	<p>1.35.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO (JC60) at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.</p> <p>NK5/6: Will modify as commented. No comment</p> <p>If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.</p> <p>1.35.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. <u>The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.</u></p> <p>If, as a result, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.</p> <p>1.35.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:</p> <p>(1) New and up to date Personal Protective Equipment (PPE) and <u>other safety equipment and Temporary Works</u> (JC61) of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.</p> <p>(2) New or <u>up to date recent</u> Contractor's Equipment and Temporary Works, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary</p>
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<p>full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.</p> <p>(3) Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment by an independent testing, inspection and certification agency to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.</p> <p>NK: We considers in actual basis as follows: <i>Q1: Is Scaffoldings classified in (1) TW? If so, no need to discuss the inspection of Scaffoldings before shipment? Shall Scaffoldings be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?</i></p> <p>Steel and system scaffolding etc. is considered as Contractor's Equipment but other types may be TW. This is also not covered by Chapter 4 of your draft.</p> <p>I have defined this is 1.35.1 and as it is an important item for which there should be no future argument.</p> <p><i>Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffoldings, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.</i></p> <p>Yes, see it includes all of these and yes much will be constructed or assembled at the Site but some major components (e.g. steel sheet piling, anchors, support systems and other components and materials) may be imported in which case this applies. Please refer also to definition in 1.35.1.</p> <p><i>Can we delete "and Temporary Works" in (2)?</i></p> <p>I do not recommend it.</p> <p><i>Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.</i></p> <p>This is not my recollection although it was mentioned as examples and my explanation covered all types of Contractor's Equipment.</p> <p><i>We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies own old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too. If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.</i></p> <p>If you don't want pre-inspection at origin that is of course your choice. How to ascertain that it is compliant if there is no pre-inspection? It is too late when it arrives on site. I have given my suggestion and repeatedly explained this.</p> <p>If JICA do not what this to apply, please let me have your instructions on what shall be changed and how.</p> <p><i>We propose to delete the 2nd sentence above.</i></p> <p>I do not agree for above reason but respect your wish. Just delete it.</p> <p><i>In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."</i></p> <p><i>JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair</i></p>	<p>(2) New or recent Contractor's Equipment and Temporary Works, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.</p> <p>(11) Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment before delivering the Site (JC62) to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.</p> <p>JC62: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant?</p> <p>NK5/6: Will modify as commented.</p>	<p>spare parts and consumables, suitable and safe for use on the Works; and</p> <p><i>I suggest that "recent" is changed to "up to date" to be consistent with clause (1), to give it improved meaning (although still not definitive), particularly in view of the omission of the 5 year age limitation (which was definitive).</i></p> <p>that all of the above will be used correctly and for the purpose intended.</p> <p>(3) Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before delivering the Site (JC62) to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.</p> <p><i>This inspection was originally for the purpose of checking that the equipment was new or less than 5-years old.</i></p> <p><i>However, as the age criteria has now been deleted, there is no reason why the Engineer should inspect the equipment and no criteria by which he can determine that the equipment is compliant or otherwise. This being the case, I recommend that this useful safeguard clause should now be deleted also.</i></p> <p><i>Without clear age, criteria I do not recommend that any inspection would be time limited, could not include a full mechanical or operational check and ultimately will result in personal opinion. It may also be compromise later attempts to reject equipment at site when it is then found to be unsafe.</i></p> <p><i>Had the age criteria still been maintained, agency inspection would be a very easy and possibly more efficient alternative.</i></p> <p>JC62: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant?</p> <p>NK5/6: Will modify as commented.</p> <p><i>I note that aside from using the word "recent" which now has no real meaning (see above suggested change) the 5-year age limitation has been deleted here (and in the BDS).</i></p> <p><i>This therefore effectively prevents the engineer from clearly and undisputedly rejecting aged and potentially unsafe or non-compliant equipment including equipment, which might be in good condition but is without modern safety features or which is inherently unsafe.</i></p>
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or maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."

There is no reason why anything should be added here and do not suggest that this is added as it is unnecessary duplication.

Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old. The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?

JICA are paying market bid rates for the best most productive and safest equipment, why should this be compromised? I have already given my explanations and recommendation, please let me have your instructions on what this shall be changed to or if it shall be deleted.

Many contractors will definitely not like this age imposition because it is regularly abused in the pursuit of profit.

NK: 1.35.4 に関しまして上記をご参考に貴機構のご意見をお願い致します。

1.36 Health Matters

1.36.1. The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

~~1.36.2. Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site.~~

1.36.3. Occupational health care shall be provided by the Contractor and shall include ~~for example~~

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) Frequent or excessive manual handling of loads, stress and fatigue.
- (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability.

1.36.4. The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or

1.36 Health Matters

1.36.1 The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.36.2 Healthcare services and facilities at the Site shall be made available free of charge, to or for the use of the Contractor's Personnel, the Employer's Personnel and all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such healthcare services shall also be made available for free of charge for the family members of the aforementioned personnel/persons. (JC63)

JC63: Same comment as 1.24

NK5/6: Will modify as commented.

(JC64)

JC64: See 1.2.2 (6).

~~1.36.1~~ 1.36.3 Occupational health care shall be provided by the Contractor and shall include:

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) Avoiding (JC65) Frequent or excessive manual handling of loads, stress and fatigue.

JC65: Better to add ???

NK5/6: Will modify as commented.

- (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability. (JC66)

1.36 Health Matters

1.36.1 The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.

1.36.2 Healthcare services and facilities at the Site shall be made available free of charge, to or for the use of the Contractor's Personnel, the Employer's Personnel and all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such healthcare services shall also be made available for free of charge for the family members of the aforementioned personnel/persons. (JC63)

~~1.36.1~~ 1.36.3 Occupational health care shall be provided by the Contractor and shall include:

- (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]).
- (2) Occupational health care including noise, frequent or excessive use of vibrating tools.
- (3) Avoiding (JC65) Frequent or excessive manual handling of loads, stress and fatigue.
- (4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability. (JC66)

<p>quantities of:</p> <ol style="list-style-type: none"> (1) Health care staff to be assigned at the Site. (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas. (3) Healthcare services to be provided including lectures and education on health matters. (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables. (5) Occupational HA healthcare proposal. (6) Temporary water and power supply to maintain use during mains supply failure. (7) Type of communication facilities and measures for emergency response. <p>NK: May we know example of emergency response? Please let me know what facilities you require and I will edit. NK: We will further consider it.</p> <p>1.36.5. Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site.</p> <p>1.36.6. Report of Serious Illness</p> <ol style="list-style-type: none"> (1) The Contractor shall inform the Engineer and submit details of any serious illness. <p>NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.? It is up to you. Under GCC 6.7 The Contractor is required to maintain records and make reports concerning health matters to the Engineer as the Engineer may reasonably require. This is a further suggestion to try to reduce the volume and contents of report to be prepared. Please see (4) following, the above can be omitted if required.</p> <ol style="list-style-type: none"> (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer. (3) The report shall include details of the HSO's recommended counter-measures. <p>NK: Is "HSO" replaced with Contractor as same as (2) above? No, I do not recommend this. Please refer to the previous notes on this subject, the Contractor may send it but the Health and Safety Officer will prepare it.</p>	<p>JC66: Is this health care service? NK5/6: Will modify as commented.</p> <p>1.36.2 1.36.4 The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:</p> <ol style="list-style-type: none"> (1) Health care staff to be assigned at the Site. (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas. (3) Healthcare services to be provided including lectures and education on health matters. (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables. (5) Occupational healthcare proposal. (6) Temporary water and power supply to maintain use during mains supply failure. (7) Type of communication facilities and measures for emergency response. <p>1.36.3 1.36.5 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site <u>to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect</u> all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC67)</p> <p>JC67: See 1.2.2 (6). NK5/6: Will modify as commented.</p> <p>1.36.4 1.36.6 Report of Serious Illness</p> <ol style="list-style-type: none"> (1) The Contractor shall inform the Engineer and submit details of any serious illness. (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer. (3) The report shall include details of the HSO's recommended counter-measures. (4) The Engineer is to be consulted on the types of illness for which reports are to be informed. 	<p>1.36.2 1.36.4 The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:</p> <ol style="list-style-type: none"> (1) Health care staff to be assigned at the Site. (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas. (3) Healthcare services to be provided including lectures and education on health matters. (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables. (5) Occupational healthcare proposal. (6) Temporary water and power supply to maintain use during mains supply failure. (7) Type of communication facilities and measures for emergency response. <p><u>1.36.5 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC67)</u></p> <p>NK5/6: Will modify as commented. Please refer to my earlier comment under 1.24.6 and for the same reasons I do not recommend that this change be made.</p> <p>1.36.3 1.36.6 Report of Serious Illness</p> <ol style="list-style-type: none"> (1) The Contractor shall inform the Engineer and submit details of any serious illness. (2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer. (3) The report shall include details of the HSO's recommended counter-measures. (4) The Engineer is to be consulted on the types of illness for which reports are to be informed.
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<p>(4) The Engineer is to be consulted on the types of illness for which reports are to be informed.</p> <p>1.37 Design and Management of Temporary Works</p> <p>1.37.1. Unless otherwise specified in the Particular Safety Specification, <u>the Contractor is</u> required to comply with BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.</p> <p>Changed already</p> <p>1.37.2. An alternative standard is acceptable by reference to JSSS 1.4.7 [<i>Specified Standards and Regulations</i>] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works including <u>Class A Falsework</u>.</p> <p>NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specified specially referring to the following BS5975? <i>Section 1: General 1 Scope "This guidance is also applicable to the design of what is termed class A falsework 1) in BS EN 12812:2004, the design of which is for example specifically excluded from BS EN 12812:2004.</i></p> <p>Please also refer to BS 5975, Foreword, page VII, penultimate paragraph:</p> <p><u>The European standard on falsework, BS EN 12812, exists in parallel with this British Standard. It specifies performance requirements for the design of falsework in accordance with one of three classes: A, B1 and B2. Limit state design methods are specified for design classes B1 and B2. It does not provide guidance for the structural design of Class A. It is recommended that Section 3 is used to provide guidance for Class A falsework.</u></p> <p><u>It appears to follow that BS EN 12812 is not necessarily an acceptable alternative for example because Class A is excluded, I have assume therefore that it is necessary to state the need for Class A Falsework.</u></p> <p><u>Please be aware that I have not reviewed or studied the BS in detail so please do not assume that I have, I do recommend that it is studied by JICA and NK to ascertain that it is applicable.</u></p> <p><u>Previous clause 1.34.3 regarding alternatives is not now required as I have drafted and included JSSS 1.4.7 [Specified Standards and Regulations] to cover this generally.</u></p> <p><u>Previous clause 1.34.6 has already been deleted.</u></p> <p><u>There is no need for the suggested insertion into the following clause (previous Clause 1.34.7) as per Ito san's comment.</u></p> <p>1.37.3. It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.</p> <p>1.37.4. It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.</p> <p>1.37.5. The Contractor shall prepare and implement suitable procedures whereby</p>	<p>1.37 Design and Management of Temporary Works</p> <p>1.37.1 Unless otherwise specified in the Particular Safety Specification, the Contractor is required to comply with <u>the management standard with respect to design, erection, use and dismantling of Temporary Works provided in Section 1 and Section 2 of BS5975</u>: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework. (JC68)</p> <p>JC68: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.</p> <p>NK5/6: Will modify as commented.</p> <p>1.37.2 An alternative standard is acceptable by reference to JSSS 1.4.7 [<i>Specified Standards and Regulations</i>] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works (JC69).</p> <p>JC69: delete it?</p> <p>NK5/6: Will delete as commented because the sentence is for the management of Temporary Works, so Class A Falsework; one of TWs, is not needed to be specially mentioned.</p> <p>1.37.3 It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.</p> <p>1.37.4 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.</p>	<p>1.37 Design and Management of Temporary Works</p> <p>1.37.1 Unless otherwise specified in the Particular Safety Specification, the Contractor is required to comply with <u>the management standard with respect to design, erection, use and dismantling of Temporary Works provided in Section 1 and Section 2 of BS5975</u>: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework. (JC68)</p> <p>NK5/6: Will modify as commented.</p> <p>No comment</p> <p>1.37.2 An alternative standard is acceptable by reference to JSSS 1.4.7 [<i>Specified Standards and Regulations</i>] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works (JC69).</p> <p>NK5/6: Will delete as commented because the sentence is for the management of Temporary Works, so Class A Falsework; one of TWs, is not needed to be specially mentioned.</p> <p>No comment</p> <p>1.37.3 It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.</p> <p>1.37.4 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.</p>
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<p>all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.37.6. Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [<i>Health and Safety Officer at the Site (HSO)</i>].</p> <p>JC: JICA commented as follows: <i>Issue 6 1.34.8 Too much to require the Contractor name all the specialist staff at the Bid stage. It is also excessive to require consent of the Engineer for those specialist staff.</i> <i>"Necessary qualification" can be combined with 1.34.12 or 1.34.13.</i> <i>Issue 6 1.34.9 If comply with JSSS1.9, all the specialist staff shall be appointed before the commencement, and subject to the Engineer's consent.</i></p> <p>NK: From this comment, the 1.37.12 below is enough requirement. 1.37.6 above specifies to refer to 1.12, which 1.12 is for HSO, it seems difficult to apply for personnel of TW. <i>As 1.3.12 specifies requirement and necessity of consent of the Engineer, we propose to delete 1.37.6.</i></p> <p>I understand your comment and have no objection to the deletion of 1.37.6</p> <p>1.37.7. Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.</p> <p>(1) The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [<i>Contractor's Method Statements</i>]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.</p> <p>(2) The Engineer has no obligation under the Contract to review Temporary Works design, however he may choose to do so for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975. The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [<i>Engineer's Duties and Authority</i>]. Sub Subclause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.</p> <p>I have given further thought to the following clause which was originally considered as an exception. I am now of the opinion that offering such alternative to an Employer to state his requirements in the PSSS is not a good idea as it may result have a negative effect.</p> <p>Most JICA funded projects are large projects and will have a Temporary Works content.</p> <p>I suggest that the following alternative clause should be deleted to make these important requirements very clear.</p>	<p>1.37.5 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.37.6 Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [<i>Health and Safety Officer at the Site (HSO)</i>].</p> <p>1.37.7 Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.</p> <p>(1) The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [<i>Contractor's Method Statements</i>]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.</p> <p>(2) The Engineer <u>may</u> review Temporary Works design for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 <u>or any other acceptable standard in accordance with JSSS 1.37.2.</u></p> <p>JC70: Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?</p> <p>NK5/6: Will modify as commented.</p>	<p>1.37.5 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.37.6 Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [<i>Health and Safety Officer at the Site (HSO)</i>].</p> <p>1.37.7 Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.</p> <p>(1) The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [<i>Contractor's Method Statements</i>]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.</p> <p>(2) The Engineer <u>may</u> review Temporary Works design for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 <u>or any other acceptable standard in accordance with JSSS 1.37.2.</u></p> <p>NK5/6: Will modify as commented.</p> <p>Will look at this when I review the user guide</p>
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<p>If there is only a small and simple TW content, even if the BS 5975 is applied it will not cause any major harm or cost.</p> <p>The sample specification provided some time back by JICA for the Hong Kong Project showed that all work shall comply with the BS.</p> <p>NK: MD氏は上記の理由で次の1.37.8の条項は不要であると考え削除を提案しています。ご検討をお願いします。</p> <p>1.37.8. Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:</p> <ol style="list-style-type: none"> (1) Appointment of appropriately qualified and experienced staff. (2) Preparation of adequate Temporary Works designs. (3) Independent internal or external checking of the Temporary Works Design. (4) Preparation of a Temporary Works register and records (5) Pre-erection inspection of all Temporary Works, including materials, components and equipment. (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to: <ol style="list-style-type: none"> (a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO Contractor of a suitable sign showing it as complete and safe to use; and (b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and issue by the HSO Contractor of a suitable sign showing that it is ready for dismantling. <p>NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause, we consider HSO will be replaced with Contractor as JICA commented: Should it be HSO? When BS5975 applies. TWC/TWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?</p> <p>The above applies when BS 5975 doesn't therefore I suggest (subject to JICA and NK agreement) that this can be deleted.</p> <p>However, yes, the Temporary Works staff are all involved to make sure that the Temporary Works are designed and executed correctly, however the HSO is ultimately responsible for ALL safety on the Works and nothing should avoid his overview. I recommend that this should remain as HSO, I believe that it is a correct requirement which in practice should not be more than a counter signature.</p> <p>1.37.9. In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.</p> <p>NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?</p>	<p>1.37.8 Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:</p> <ol style="list-style-type: none"> (1) Appointment of appropriately qualified and experienced staff. (2) Preparation of adequate Temporary Works designs. (3) Independent internal or external checking of the Temporary Works Design. (4) Preparation of a Temporary Works register and records (5) Pre-erection inspection of all Temporary Works, including materials, components and equipment. (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to: <ol style="list-style-type: none"> (a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO of a suitable sign showing it as complete and safe to use; and <p>1.37.9 In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.</p>	<p>1.37.8 Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:</p> <ol style="list-style-type: none"> (1) Appointment of appropriately qualified and experienced staff. (2) Preparation of adequate Temporary Works designs. (3) Independent internal or external checking of the Temporary Works Design. (4) Preparation of a Temporary Works register and records (5) Pre-erection inspection of all Temporary Works, including materials, components and equipment. (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to: <ol style="list-style-type: none"> (a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO of a suitable sign showing it as complete and safe to use; and <p>1.37.9 In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.</p>
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<p>I understand and agree with your comment. However, JSSS 1.18 gives rules for the proper placement of Contractor's Personnel and it probably better therefore to rephrase this as above.</p> <p>The following clause can be deleted</p> <p>1.37.10. For further information on Method Statements refer to JSSS 1.9 [Contractor's Method Statements].</p> <p>1.37.11. For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].</p> <p>1.37.12. Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties. and shall obtain the consent of the Engineer.</p> <p>NK: We think 1.3.12 is too long sentence to clearly understand requirement.</p> <p>Yes I agree and have reworded this as above.</p> <p>Q-1 Is consent by the Engineer given to specialist staff?</p> <p>This part can be deleted.</p> <p>Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?</p> <p>We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.</p> <p>I have reworded all, please refer to the above</p> <p>1.38 User Training</p> <p>NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below: MM: This section will be left in the next draft and perhaps deleted in the final draft.</p> <p>NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.</p> <p>I recommend that it be included here as a default requirement.</p> <p>NK: 貴機構のご意見はいかがでしょうか？</p> <p>1.38.1. Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.</p> <p>1.38.2. The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.</p> <p>1.38.3. User Training shall vary according to the scope of the Works however it shall generally cover the following:</p> <p>(1) Safe system and Plant use, operation and process control.</p>	<p>1.37.10 For further information on Method Statements refer to JSSS 1.9 [Contractor's Method Statements].</p> <p>1.37.11 For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].</p> <p>1.37.12 Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties.</p> <p>1.38 User Training (Deleted) (JC71)</p> <p>JC71: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.</p> <p>NK5/6: Will delete as commented.</p>	<p>1.37.10 For further information on Method Statements refer to JSSS 1.9 [Contractor's Method Statements].</p> <p>1.37.11 For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].</p> <p>1.37.12 Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties.</p> <p>1.38 (JC71)</p> <p>NK5/6: Will delete as commented.</p> <p>Note for NK: This is safety during construction, it refers to the provision of effective safety training for equipment and systems provided during under ODA construction contracts.</p>
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- ~~(2) System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements~~
 - ~~(3) Training in use of all hardware and software packages.~~
 - ~~(4) Laboratory control (sampling and analysis) including operation of laboratory equipment.~~
 - ~~(5) Recording and reporting.~~
 - ~~(6) Emergency operation procedure.~~
 - ~~(7) Maintenance management procedures.~~
 - ~~(8) Inventory and store control systems.~~
 - ~~(9) Particular safety procedures, including:~~
 - ~~(a) Safe working procedure;~~
 - ~~(b) Housekeeping of the facilities;~~
 - ~~(c) Identification of accident prone, dangerous or hazardous conditions, locations or operations; and~~
 - ~~(d) Safety measures for the Works and all items of Plant.~~
- ~~1.38.4. Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.~~
- ~~1.38.5. The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.~~
- ~~1.38.6. Other requirements for User Training—~~
- ~~(1) The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.~~
 - ~~(2) User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.~~
 - ~~(3) The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.~~
 - ~~(4) The Engineer may choose to send representatives to witness the training.~~
 - ~~(5) The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.~~
 - ~~(6) Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.~~
 - ~~(7) The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty six (56) days before any training commences.~~

- ~~(8) Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.~~
- ~~(9) The Contractor shall use visual media as much as possible throughout the training process.~~
- ~~(10) Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.~~
- ~~(11) The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.~~
- ~~(12) Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.~~
- ~~(13) The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.~~
- ~~(14) The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.~~
- ~~(15) Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.~~
- ~~(16) The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty six (56) days.~~
- ~~(17) Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week days.~~
- ~~(18) Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.~~

~~(19) The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.~~

1.39 Unexploded Ordnance (UXO)

NK: we considers JICA may not specify 1.39 in detail as the minutes of meeting below:
MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

MD's reply: The Employer should inform the Contractor of the likely existence of UXO and if possible remove. The Contractor shall report any UXO then found to the Employer/Engineer for further instruction. This needs to be included in JSSS and the User Guide so that both parties are aware of the other's obligations. I have edited this to make the Employer responsible and have and separated accordingly.

NK: We have no comments to 1.39. xd v

For your further information, please note that this is an Employer's Risk under GC 17.3 (d).

The problem is, that GC 17.3 places no obligation upon the Employer (who should be more aware than anyone of the possible risk) to advise of the existence, to survey and remove such UXO before bidding or after if then encountered.

This is the reason behind including this in JSSS.

This clause may need some slight modification when I again work on the User Guide.

NK: 貴機構のご意見はいかがでしょうか？

- 1.39.1. If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.
- 1.39.2. Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.
- 1.39.3. Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.
- 1.39.4. Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.
- 1.39.5. Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy if the further clearance certificate together with any further instructions from the Engineer.

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ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS Annex 1.1: Definitions and Abbreviations	ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS Annex 1.1: Definitions and Abbreviations	ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS Annex 1.1: Definitions and Abbreviations
<p>A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:</p> <ol style="list-style-type: none"> (1) “Executing Agency” means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer. (2) “GC” and “PC” followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause. (3) “Health and Safety Officer” or “HSO” means the Contractor’s health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [<i>Health and Safety</i>] as construed in accordance with JSSS 1.12 [<i>Health and Safety Officer at the Site (HSO)</i>]. (4) “JICA Standard Safety Specification” or “JSSS” means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works. (5) “Method Statement” means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [<i>Contractor’s General Obligations</i>] and supplemented by JSSS 1.9 [<i>Contractor’s Method Statements</i>]. (6) “Operation Leader” (also known variously as a “Ganger”, “Leading Hand”, “Foreman” (working and non-working), “Team Leader”, “Superintendent”, “Supervisor” and the like) means a member of the Contractor’s workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor’s safety regulations and who can also be referred to within the OSHA definition as a “Competent Person”. (7) “OSHA” means the technical requirements of “OSHA Standard Part 1926 Safety and Health Regulations for Construction”, as written in Code of Federal Regulations (29 CFR) and published by the Occupational Safety and Health Administration, U.S. Department of Labor. 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- health and safety requirements for the Project as illustrated in Annex 1.4 [Figures and Illustrations].
- (9) “**Project Safety Specification**” means the document that contains Part 1 [JSSS] and Part 2 [Particular Safety Specification] as illustrated in Annex 1.4 [Figures and Illustrations].
- (10) “**Project**” means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.
- (11) “**Safety Plan**” means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in GC 4.1 [Contractor’s General Obligations] as supplemented by JSSS 1.7 [Contractor’s Safety Plans].
- (12) “**Safety**” shall also mean “occupational health and safety” and “health and safety”.
- (13) “**User Guide**” means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.

NK: There is no “User Guide” specified in JSSS. Does it necessary to define it in JSSS?

I think as it will be published on line probably at the same time as JSSS, it does need definition and more importantly, it requires a clear statement in JSSS, that it is NOT a part of the Contract (see added clause JSSS 0.)

It is my understanding that the User Guide is for the reference of the Employer only and it is probably also a good idea therefore to describe it as “An Employer’s Guide” or something like that to make it very clear.

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

- (1) “**Accident Response**” means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [Accident Response Plan].
- (2) “**Confined Spaces**” means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.
- (3) “**Cofferdam**” means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.
- (4) “**Dangerous Goods**” means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured ‘diamond’ symbols.

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Please refer to my earlier notes repeated above from the previous issue of the draft.

Following my further review and study, I feel that this is an important issue which if not addressed, may create unnecessary future risk for JICA

Please refer to my notes on this subject under Clause 1.3.2 and consider changing the title of the “User Guide” perhaps to “Guide for the Use of Executing Agencies”

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Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as</p>	<p>classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. 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<p>Zone 0, Zone 1 or Zone 2, where:</p> <p>(a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;</p> <p>(b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and</p> <p>(c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.</p> <p>NK: May we know the source of Classification? May we know if this Zones are specified in JSSS?</p> <p>Classification of Zones is from the Technical Measures Document of HSE. https://www.hse.gov.uk/comah/sragtech/techmeasareaclas.htm</p> <p>OSHA also have a classification which is more complicated.</p> <p>Please be aware that in the absence of information in your draft, this is my suggestion but in every case and I rely on JICA and NK to check and confirm this. If you do not want to use this, please advise me and I will delete.</p> <p>NK: 再考いたします。(現時点ではJSSSでは規定していません。)</p> <p>(15) “Hoisting Operation” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.</p> <p>For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [<i>Hoisting and Rigging</i>].</p> <p>(16) “Operational Area” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.</p> <p>(17) “Personal Fall Arrest System” or “PFAS” means a fall protection system that is designed to arrest a worker in a fall from a working level.</p> <p>(18) “Personal Fall Restraint System” or “PFRS” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.</p> <p>(19) “Personal Protective Equipment” or “PPE” means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.</p> <p>(20) “Safety Belt” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.</p> <p>(21) “Safety Harness” means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and</p>	<p>Zone 0, Zone 1 or Zone 2, where:</p> <p>(a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;</p> <p>(b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; 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<p>deceleration device to safely arrest and support any worker during a fall.</p> <p>(22) “Scaffold” or “Scaffolding” means a temporary structure or structures that provide access on or from which persons work or to support Goods.</p> <p>(23) “Skill Training” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [<i>Skill Training</i>]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.</p> <p>(24) “Spotter” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [<i>Spotters Flagmen and the Like</i>].</p> <p>Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.</p> <p>(25) “Trade Effluent” means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.</p> <p>(26) “Unexploded Ordnance” or “UXO” shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.</p> <p>(27) “User Training” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident.</p> <p>(28) “Working Platform” means a platform on or within a scaffold that is intended and designed to support persons or Goods.</p> <p>A1.1.3. The following abbreviations of technical terms shall have the meanings stated:</p> <table border="0"> <tr><td>AED</td><td>Automatic External Defibrillator</td></tr> <tr><td>BMGV</td><td>Biological Monitoring Guidance Values</td></tr> <tr><td>CPR</td><td>Cardiopulmonary Resuscitation</td></tr> <tr><td>ODA</td><td>Official Development Aid</td></tr> <tr><td>OJT</td><td>On Job Training</td></tr> </table>	AED	Automatic External Defibrillator	BMGV	Biological Monitoring Guidance Values	CPR	Cardiopulmonary Resuscitation	ODA	Official Development Aid	OJT	On Job Training	<p>a fall.</p> <p>(22) “Scaffold” or “Scaffolding” means a temporary structure or structures that provide access on or from which persons work or to support Goods.</p> <p>(23) “Skill Training” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [<i>Skill Training</i>]. 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<p>PFAS Personal Fall Arrest System</p> <p>PFRS Personal Fall Restraint System</p> <p>PPE Personal Protective Equipment</p> <p>TBM Tool Box Meetings</p> <p>TWA Time Weighted Average</p> <p>WEL Workplace Exposure Limits</p> <p>A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:</p> <p>ACI American Concrete Institute</p> <p>ANSI American National Standards Institute.</p> <p>ASHTO American Association of State of Highway Transportation Officials</p> <p>ASME American Society of Mechanical Engineers</p> <p>ASTM American Society for Testing and Materials.</p> <p>BS British Standard.</p> <p>BS EN British Standard European Norm.</p> <p>HSE UK Health and Safety Executive.</p> <p>ISO International Organisation for Standardisation.</p> <p>ILO International Labor Organization.</p> <p>JIS Japanese Industrial Standards.</p> <p>A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.</p> <p>Annex 1.2: Content of Bid Stage Safety Plan</p> <p>1.35.5. A1.2.1 This Annex lists the required content for the Bid Stage Safety Plan which is to be provided in accordance with "Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works", published by the Japan International Cooperation Agency (JICA). The Safety plan is to be included in the Bidding Documents Part 1 Bidding Procedures, Section I. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF-39.</p> <p>NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?</p> <p>I think both are useful as the contractor should also be aware of requirements.</p> <p>It is very important that the Employer/Consultant are prevented from altering the detail of this Annex in their Bidding Documents in any way, as all items are required in the Bid Stage Plan, all are coordinated with JSSS, the same structure, terminology and numbering must be used.</p>	<p>PFRS Personal Fall Restraint System</p> <p>PPE Personal Protective Equipment</p> <p>TBM Tool Box Meetings</p> <p>TWA Time Weighted Average</p> <p>WEL Workplace Exposure Limits</p> <p>A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:</p> <p>ACI American Concrete Institute</p> <p>ANSI American National Standards Institute.</p> <p>ASHTO American Association of State of Highway Transportation Officials</p> <p>ASME American Society of Mechanical Engineers</p> <p>ASTM American Society for Testing and Materials.</p> <p>BS British Standard.</p> <p>BS EN British Standard European Norm.</p> <p>HSE UK Health and Safety Executive.</p> <p>ISO International Organisation for Standardisation.</p> <p>ILO International Labor Organization.</p> <p>JIS Japanese Industrial Standards.</p> <p>A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.</p> <p>Annex 1.2: Content of Bid Stage Safety Plan</p>	<p>PFAS Personal Fall Arrest System</p> <p>PFRS Personal Fall Restraint System</p> <p>PPE Personal Protective Equipment</p> <p>TBM Tool Box Meetings</p> <p>TWA Time Weighted Average</p> <p>WEL Workplace Exposure Limits</p> <p>A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:</p> <p>ACI American Concrete Institute</p> <p>ANSI American National Standards Institute.</p> <p>ASHTO American Association of State of Highway Transportation Officials</p> <p>ASME American Society of Mechanical Engineers</p> <p>ASTM American Society for Testing and Materials.</p> <p>BS British Standard.</p> <p>BS EN British Standard European Norm.</p> <p>HSE UK Health and Safety Executive.</p> <p>ISO International Organisation for Standardisation.</p> <p>ILO International Labor Organization.</p> <p>JIS Japanese Industrial Standards.</p> <p>A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.</p> <p>Annex 1.2: Content of Bid Stage Safety Plan</p>
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I suggest that this will be reworded something like the following, which I will do when I get back to work on the User Guide further.

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor's Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder's intentions, so that this can be understood and properly evaluated.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic policies on health and safety management (compliance with Laws of the Country and description of responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.

A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [Contractor's Safety Plan]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.

A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder's intentions, so that this can be understood and properly evaluated. (JC72)

JC72: Please add "outline (or policy?) of risk assessment" as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11) "Safety Plan" means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods,.....

NK5/6: To MD, we would like to ask you to add as commented.

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

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(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

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A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder's intentions, so that this can be understood and properly evaluated. (JC72)

NK5/6: To MD, we would like to ask you to add as commented.

See (2) below:

(1) Description of the Works

A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.

(2) Bidder's Corporate Policy on Health and Safety Management

A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic company policies on risk assessment and health and safety management,

(compliance with Laws of the Country and description of responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams, etc.).

Transferred to below:

(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel

A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.

A description of the responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site

<p>(4) Health and Safety Laws</p> <p>A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.</p> <p>(5) Bidder's Safety Management System</p> <p>Refer to JSSS 1.5 [<i>Contractor's Safety Management System</i>]</p> <p>Confirm which scheme the Bidder is accredited under.</p> <p>(6) Temporary Works</p> <p>Refer to JSSS 1.37 [<i>Design and Management of Temporary Works</i>].</p> <p>A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.</p> <p>NK: JICA added "outline" in the last comment.</p> <p>OK I have amended</p> <p>(7) Temporary Facilities on Site</p> <p>The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)</p> <p>NK: We consider that the above sentence is independent clause from (6) above and locate in some place.</p> <p>I have edited as above</p> <p>(8) Safety Measures for Contractor's Design of the Permanent Works</p> <p>If, under GC 4.1 [<i>Contractor's General Obligations</i>], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.</p> <p>(9) Safety Plan for the Works</p> <p>NK: May the title be Works?</p> <p>I have edited as above</p> <p>A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.</p> <p>(10) Safety Plan for Dangerous Work.</p> <p>Refer to JSSS 1.22 [<i>Dangerous Work</i>]</p>	<p>(4) Health and Safety Laws</p> <p>A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.</p> <p>(5) Bidder's Safety Management System (JC73)</p> <p>Refer to JSSS 1.5 [<i>Contractor's Safety Management System</i>]</p> <p><u>Describe how</u> the Bidder <u>institutes the Safety Management System</u>.</p> <p>JC73: Modified in accordance with modification to JSSS1.5</p> <p>NK5/6: Will modify as commented.</p> <p>(6) Temporary Works</p> <p>Refer to JSSS 1.37 [<i>Design and Management of Temporary Works</i>].</p> <p>A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.</p> <p>(7) Temporary Facilities on Site</p> <p>The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)</p> <p>(8) Safety Measures for Contractor's Design of the Permanent Works</p> <p>If, under GC 4.1 [<i>Contractor's General Obligations</i>], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.</p> <p>(9) Safety Plan for the Works</p> <p>A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.</p> <p>(10) Safety Plan for Dangerous Work.</p> <p>Refer to JSSS 1.22 [<i>Dangerous Work</i>]</p>	<p>safety teams.</p> <p>Transferred from above</p> <p>(4) Health and Safety Laws</p> <p>A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.</p> <p>(5) Bidder's Safety Management System (JC73)</p> <p>Refer to JSSS 1.5 [<i>Contractor's Safety Management System</i>]</p> <p><u>Describe how</u> the Bidder <u>institutes the Safety Management System</u>.</p> <p>NK5/6: Will modify as commented.</p> <p>No comment</p> <p>(6) Temporary Works</p> <p>Refer to JSSS 1.37 [<i>Design and Management of Temporary Works</i>].</p> <p>A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.</p> <p>(7) Temporary Facilities on Site</p> <p>The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)</p> <p>(8) Safety Measures for Contractor's Design of the Permanent Works</p> <p>If, under GC 4.1 [<i>Contractor's General Obligations</i>], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.</p> <p>(9) Safety Plan for the Works</p> <p>A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.</p> <p>(10) Safety Plan for Dangerous Work.</p> <p>Refer to JSSS 1.22 [<i>Dangerous Work</i>]</p>
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<p>A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>] and GC 4.1 [<i>Contractor's General Obligations</i>].</p> <p>(11) Permit to Work System</p> <p>Refer to JSSS 1.23 [<i>Permit to Work System</i>]</p> <p>A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.</p> <p>(12) Safety Measures for Contractor's Equipment</p> <p>Refer to JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>]</p> <p>A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.</p> <p>(13) Proposed Health and Safety Incentive Scheme</p> <p>Refer to JSSS 1.34 [<i>Health and Safety Incentive Schemes</i>]</p> <p>A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.</p> <p>(14) Safety Information Sharing and Communications Policy</p> <p>A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.</p> <p>A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.</p> <p>(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)</p> <p>Refer to JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>]</p> <p>A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.</p> <p>(16) Site Inspection Plan</p> <p>A description of the methods for Site inspections by the HSO, types of inspection and frequency.</p>	<p>A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>] and GC 4.1 [<i>Contractor's General Obligations</i>].</p> <p>(11) Permit to Work System</p> <p>Refer to JSSS 1.23 [<i>Permit to Work System</i>]</p> <p>A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.</p> <p>(12) Safety Measures for Contractor's Equipment</p> <p>Refer to JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>]</p> <p>A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.</p> <p>(13) Proposed Health and Safety Incentive Scheme</p> <p>Refer to JSSS 1.34 [<i>Health and Safety Incentive Schemes</i>]</p> <p>A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.</p> <p>(14) Safety Information Sharing and Communications Policy</p> <p>A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.</p> <p>A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.</p> <p>(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)</p> <p>Refer to JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>]</p> <p>A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.</p> <p>(16) Site Inspection Plan</p> <p>A description of the methods for Site inspections by the HSO, types of inspection and frequency.</p>	<p>A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>] and GC 4.1 [<i>Contractor's General Obligations</i>].</p> <p>(11) Permit to Work System</p> <p>Refer to JSSS 1.23 [<i>Permit to Work System</i>]</p> <p>A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.</p> <p>(12) Safety Measures for Contractor's Equipment</p> <p>Refer to JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>]</p> <p>A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. 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<p>The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work</p> <p>(17) Site Security</p> <p>A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.</p> <p>The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.</p> <p>(18) Policy for Preventing Traffic Accidents</p> <p>A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.</p> <p>A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.</p> <p>(19) Reporting Procedure for Unsafe Conditions and Behaviour</p> <p>A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.</p> <p>(20) Accident Response Plan</p> <p>(10) Refer to JSSS 1.23.1 [<i>Accident Response Plan</i>]</p> <p>The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.</p> <p>It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.</p> <p>NK: We consider that the above sentence is independent clause from (19) above and locate in some place.</p> <p>Deletion is OK</p> <p>(21) Health Care Plan</p> <p>Refer to JSSS 1.36 [<i>Health Matters</i>]</p> <p>A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.</p> <p>A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.</p>	<p>The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work</p> <p>(17) Site Security</p> <p>A description of the proposed Site security methods explaining how 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systems of warning, punishment and dismissal for non-compliance should also be included.</p> <p>(19) Reporting Procedure for Unsafe Conditions and Behaviour</p> <p>A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.</p> <p>(20) Accident Response Plan</p> <p>(11) Refer to JSSS 1.23.1 [<i>Accident Response Plan</i>]</p> <p>The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.</p> <p>(21) Health Care Plan</p> <p>Refer to JSSS 1.36 [<i>Health Matters</i>]</p> <p>A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.</p>
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<p>(22) Fire Response Plan</p> <p>Refer to JSSS 2.8 [<i>Fire Prevention</i>]</p> <p>Details of the fire prevention services to be provided at the Site.</p> <p>The Fire Response Plan required by JSSS 2.8 [<i>Fire Prevention</i>].</p> <p>(23) Emergency Response Plan</p> <p>Refer to JSSS 1.26 [<i>Emergency Response Plan</i>]</p> <p>Details of the Emergency Response Plan.</p> <p>(24) Monitoring and Review of Health and Safety Management Activities</p> <p>The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [<i>Contractor's Safety Management Activities</i>]).</p> <p>(25) Safety Induction Training</p> <p>Refer to JSSS 1.20 [<i>Safety Induction Training</i>]</p> <p>An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.</p> <p>Details of special training required for Dangerous Works shall also be included.</p> <p>(26) Skill Training</p> <p>Refer to JSSS 1.21 [<i>Skill Training</i>]</p> <p>An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.</p> <p>(27) User Training</p> <p>Refer to JSSS 1.38 [<i>User Training</i>]</p> <p>An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works.</p> <p>(28) Legal requirements</p> <p>A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.</p>	<p>A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.</p> <p>(22) Fire Response Plan</p> <p>Refer to JSSS 2.8 [<i>Fire Prevention</i>]</p> <p>Details of the fire prevention services to be provided at the Site.</p> <p>The Fire Response Plan required by JSSS 2.8 [<i>Fire Prevention</i>].</p> <p>(23) Emergency Response Plan</p> <p>Refer to JSSS 1.26 [<i>Emergency Response Plan</i>]</p> <p>Details of the Emergency Response Plan.</p> <p>(24) Monitoring and Review of Health and Safety Management Activities</p> <p>The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [<i>Contractor's Safety Management Activities</i>]).</p> <p>(25) Safety Induction Training</p> <p>Refer to JSSS 1.20 [<i>Safety Induction Training</i>]</p> <p>An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.</p> <p>Details of special training required for Dangerous Works shall also be included.</p> <p>(26) Skill Training</p> <p>Refer to JSSS 1.21 [<i>Skill Training</i>]</p> <p>An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.</p> <p>(27) Legal requirements</p> <p>A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.</p>	<p>A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.</p> <p>(22) Fire Response Plan</p> <p>Refer to JSSS 2.8 [<i>Fire Prevention</i>]</p> <p>Details of the fire prevention services to be provided at the Site.</p> <p>The Fire Response Plan required by JSSS 2.8 [<i>Fire Prevention</i>].</p> <p>(23) Emergency Response Plan</p> <p>Refer to JSSS 1.26 [<i>Emergency Response Plan</i>]</p> <p>Details of the Emergency Response Plan.</p> <p>(24) Monitoring and Review of Health and Safety Management Activities</p> <p>The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [<i>Contractor's Safety Management Activities</i>]).</p> <p>(25) Safety Induction Training</p> <p>Refer to JSSS 1.20 [<i>Safety Induction Training</i>]</p> <p>An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.</p> <p>Details of special training required for Dangerous Works shall also be included.</p> <p>(26) Skill Training</p> <p>Refer to JSSS 1.21 [<i>Skill Training</i>]</p> <p>An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.</p> <p>(27) Legal Requirements</p> <p>A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.</p>
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<p>Annex 1.3: Additional Contractor Forms</p> <p>Attached Forms:</p> <p>Form JSSS/BSD - Bidder's Safety Declaration</p> <p>Form JSSS/SAR - Sample Accident Report</p>	<p>Annex 1.3: Additional Contractor Forms</p> <p>Attached Forms:</p> <p>Form JSSS/BSD - Bidder's Safety Declaration</p> <p>Form JSSS/SAR - Sample Accident Report</p>	<p>Annex 1.3: Additional Contractor Forms</p> <p>Attached Forms:</p> <p>Form JSSS/BSD - Bidder's Safety Declaration</p> <p>Form JSSS/SAR - Sample Accident Report</p>
<p style="text-align: center;">Form JSSS/BSD - Bidder's Safety Declaration</p> <p><i>[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]</i></p> <p>I, <i>[insert name and position of authorised signatory]</i>, being duly authorised by <i>[insert name of Bidder/members of joint venture ("JV")]</i> (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.</p> <p>The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.</p> <p>The Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.</p> <p>The Bidder declares that he will mobilise for use upon the Works:</p> <ol style="list-style-type: none"> 1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and 2. New or recent Contractor's Equipment and Temporary Works not more than five (5) years old, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; <p>NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.</p> <p>Please refer to my recommendations and notes in 1.35 and advise me of your requirements</p> <p>and that all of the above will be used correctly and for the purpose</p>	<p style="text-align: center;">Form JSSS/BSD - Bidder's Safety Declaration</p> <p><i>[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]</i></p> <p>I, <i>[insert name and position of authorised signatory]</i>, being duly authorised by <i>[insert name of Bidder/members of joint venture ("JV")]</i> (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.</p> <p>The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.</p> <p>The Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export (JC74) in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.</p> <p>JC74: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standards?</p> <p>NK5/6: To MD, we would like to ask you to modify as commented.</p> <p>The Bidder declares that he will mobilise for use upon the Works:</p> <ol style="list-style-type: none"> 1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and 2. New or recent Contractor's Equipment and Temporary Works all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; <p>and that all of the above will be used correctly and for the purpose</p>	<p style="text-align: center;">Form JSSS/BSD - Bidder's Safety Declaration</p> <p><i>[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]</i></p> <p>I, <i>[insert name and position of authorised signatory]</i>, being duly authorised by <i>[insert name of Bidder/members of joint venture ("JV")]</i> (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.</p> <p>The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.</p> <p>The Bidder hereby declares that after full investigation and research of domestic resources, he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export (JC74) in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.</p> <p>NK5/6: To MD, we would like to ask you to modify as commented.</p> <p>Please see above</p> <p>The Bidder declares that he will mobilise for use upon the Works:</p> <ol style="list-style-type: none"> 1. 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<p>intended.</p> <p>The Bidder further declares that he shall:</p> <ol style="list-style-type: none"> 1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks. 2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability. 3. Fully inform workers about hazards; 4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand. 5. Keep accurate records of work-related injuries and illnesses. 6. Perform tests in the workplace, such as air sampling as required by the Safety Specification. 7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged. 8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned. 9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract. 10. Post injury and illness information and data where workers can see them. 11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately. 12. Not retaliate against workers for using their rights under the Laws of the Country. <p>The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.</p> <p>The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.</p> <p>If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".</p>	<p>intended.</p> <p>The Bidder further declares that he shall:</p> <ol style="list-style-type: none"> 1. 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<p>Signed: _____</p> <p>_____ (Bidder's Official Representative)</p> <p>Name: _____</p> <p>Date: _____</p> <p>(*Delete as applicable)</p>	<p>Signed: _____</p> <p>(Bidder's Proposed Health and Safety Officer at Site*) Or Bidder's Head Office Health and Safety Manager*)</p> <p>Name: _____</p> <p>Date: _____</p> <p>(*Delete as applicable)</p>	<p>Signed: _____</p> <p>_____ (Bidder's Official Representative)</p> <p>Name: _____</p> <p>Date: _____</p> <p>(*Delete as applicable)</p>	<p>Signed: _____</p> <p>(Bidder's Proposed Health and Safety Officer at Site*) Or Bidder's Head Office Health and Safety Manager*)</p> <p>Name: _____</p> <p>Date: _____</p> <p>(*Delete as applicable)</p>
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<p>Form JSSS/SAR – Sample Accident Report</p> <p>[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]</p>		
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<p style="text-align: center;">Fig. A1.4.1</p> <p style="text-align: center;"><u>Incorporation of JSSS in Bid and Contract Documents</u></p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>List of Contract Documents and Sequence of Priority (GC 1.5):</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <ol style="list-style-type: none"> 1. the Contract Agreement (<i>if any</i>), 2. the Letter of Acceptance, 3. the Letter of Tender, 4. the Particular Conditions - Part A, 5. the Particular Conditions - Part B, 6. these General Conditions, 7. the Specification: <ol style="list-style-type: none"> (1) (2) (3) The Technical Specification: </div>	<p style="text-align: center;">Form JSSS/SAR – Sample Accident Report</p> <p>[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]</p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr><th colspan="2" style="text-align: left;">CONTRACT INFORMATION:</th></tr> <tr><td style="width:80%;">1) Name of Project:</td><td></td></tr> <tr><td>2) Project Reference Number : (e.g. L/A No., G/A No.)</td><td></td></tr> <tr><td>3) Contract Number:</td><td></td></tr> <tr><td>4) Package Description:</td><td></td></tr> <tr><td>5) Employer: (name and nationality)</td><td></td></tr> <tr><td>6) Contractor: (name and nationality)</td><td></td></tr> <tr><td>(If casualty(ies) is(are) belonging to subcontractor,) Subcontractor: (name and nationality)</td><td></td></tr> <tr><td>7) Engineer: (name and nationality)</td><td></td></tr> <tr><td>8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)</td><td></td></tr> </table> <p style="text-align: center; margin-top: 5px;"><i>(above to be inserted before all reports)</i></p>	CONTRACT INFORMATION:		1) Name of Project:		2) Project Reference Number : (e.g. L/A No., G/A No.)		3) Contract Number:		4) Package Description:		5) Employer: (name and nationality)		6) Contractor: (name and nationality)		(If casualty(ies) is(are) belonging to subcontractor,) Subcontractor: (name and nationality)		7) Engineer: (name and nationality)		8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)		<p style="text-align: center;">Form JSSS/SAR – Sample Accident Report</p> <p>[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]</p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr><th colspan="2" style="text-align: left;">CONTRACT INFORMATION:</th></tr> <tr><td style="width:80%;">1) Name of Project:</td><td></td></tr> <tr><td>2) Project Reference Number : (e.g. L/A No., G/A No.)</td><td></td></tr> <tr><td>3) Contract Number:</td><td></td></tr> <tr><td>4) Package Description:</td><td></td></tr> <tr><td>5) Employer: (name and nationality)</td><td></td></tr> <tr><td>6) Contractor: (name and nationality)</td><td></td></tr> <tr><td>(If casualty(ies) is(are) belonging to subcontractor,) Subcontractor: (name and nationality)</td><td></td></tr> <tr><td>7) Engineer: (name and nationality)</td><td></td></tr> <tr><td>8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)</td><td></td></tr> </table> <p style="text-align: center; margin-top: 5px;"><i>(above to be inserted before all reports)</i></p>	CONTRACT INFORMATION:		1) Name of Project:		2) Project Reference Number : (e.g. L/A No., G/A No.)		3) Contract Number:		4) Package Description:		5) Employer: (name and nationality)		6) Contractor: (name and nationality)		(If casualty(ies) is(are) belonging to subcontractor,) Subcontractor: (name and nationality)		7) Engineer: (name and nationality)		8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	
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<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Insert: The Project Safety Specification comprising:</p> <ol style="list-style-type: none"> 1. The Particular Safety Specification, and 2. JSSS </div> <div style="border: 1px solid black; padding: 5px;"> <p>Priorities:</p> <ol style="list-style-type: none"> 1. Within the Project Safety Specification, the Particular Safety Specification shall have priority over JSSS, and 2. The Project Safety Specification shall have priority over the Technical Specification in respect of health and safety matters. </div>	<p>FIRST REPORT INFORMATION:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">1) Date and time of accident occurrence (local time):</td><td style="width: 20%;"></td></tr> <tr><td>2) Date and time of first verbal report to Engineer:</td><td></td></tr> <tr><td>3) Exact location of accident occurrence:</td><td></td></tr> <tr><td>4) Brief background and apparent cause:</td><td></td></tr> <tr><td>5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred</td><td></td></tr> <tr><td>6) Physical damages to the Works, Site and any properties of the third parties</td><td></td></tr> <tr><td>7) Present medical status of casualty(ies):</td><td></td></tr> <tr><td>8) Present work status:</td><td></td></tr> <tr><td>9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):</td><td></td></tr> <tr><td>10) Accident Report Submission Date</td><td></td></tr> </table>	1) Date and time of accident occurrence (local time):		2) Date and time of first verbal report to Engineer:		3) Exact location of accident occurrence:		4) Brief background and apparent cause:		5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred		6) Physical damages to the Works, Site and any properties of the third parties		7) Present medical status of casualty(ies):		8) Present work status:		9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):		10) Accident Report Submission Date		<p>FIRST REPORT INFORMATION:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">1) Date and time of accident occurrence (local time):</td><td style="width: 20%;"></td></tr> <tr><td>2) Date and time of first verbal report to Engineer:</td><td></td></tr> <tr><td>3) Exact location of accident occurrence:</td><td></td></tr> <tr><td>4) Brief background and apparent cause:</td><td></td></tr> <tr><td>5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred</td><td></td></tr> <tr><td>6) Physical damages to the Works, Site and any properties of the third parties</td><td></td></tr> <tr><td>7) Present medical status of casualty(ies):</td><td></td></tr> <tr><td>8) Present work status:</td><td></td></tr> <tr><td>9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):</td><td></td></tr> <tr><td>10) Accident Report Submission Date</td><td></td></tr> </table>	1) Date and time of accident occurrence (local time):		2) Date and time of first verbal report to Engineer:		3) Exact location of accident occurrence:		4) Brief background and apparent cause:		5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred		6) Physical damages to the Works, Site and any properties of the third parties		7) Present medical status of casualty(ies):		8) Present work status:		9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):		10) Accident Report Submission Date	
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	<p>Report Receipt Date(s) _____ Time: _____</p> <p><i>(above to be inserted with detail and signatures at end of each report)</i></p>	<p>Report Receipt Date(s) _____ Time: _____</p> <p><i>(above to be inserted with detail and signatures at end of each report)</i></p>
	<p>Annex 1.4: Figures and Illustrations (JC75) JC75: Delete if nothing else other than Fig A 1.4.1 NK5/6: Will delete as commented. Attached Documents: (JC76)JC76: Move to User Guide 1.3.2 NK5/6: Will move as commented.</p>	

JICA Standard Safety Specification Preparation Study9
英文作成経緯表 1. General Requirements (Issue 9 DFR)

2020.6.30DFR

NK Coments to MD on Issu8 of 2020.5.15 for Issue 9 on 2020.6.8	MD Issue 9 Clean Copy on 2020.6.12	NK Issue 9 DFR of (2020.6.27) 2020.6.30																																																																																																																																																		
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<p>NK Comment to JICA Comments(20200506) JICA Comment and Revision (20200423) Yellow marking and red letters : Comments by NK (20200319) & (20200327) Green – subsequent changes made by DCI, <i>Replied to NK inquiry and added DCI notes</i> (20200325)</p> <p>Copy of Mail from Mr. Ito, JICA on 2020/4/23</p> <p>Regarding Chapter 1, we have sometimes modified directly the text, and sometimes put comments.</p> <p>After several times of exchange between us, please be informed of the followings:</p> <p>1) As for the modifications of text with a comment highlighted in light blue, you don't have to examine the contents any more. You are requested only to check the quality of language.</p> <p>2) As for the modifications of text without any comment, same. You are requested only to check the quality of language.</p> <p>3) The modifications of text with a comment highlighted in green are sometimes questions and sometimes requests for advice. So, would you please come up with an appropriate solution?</p> <p>As for the User Guide, our comments are still preliminary since the draft was still preliminary one. We have, nevertheless, worked in the same manner as mentioned above as long as practicable.</p> <p>Thank you for your consideration,</p>		<p>NK confirmation and comments for DFR on 20200627 Issue 9 original changes Issue 9 Updated changes: <i>Reissue by DCI to take account of JICA instruction to transfer monitoring from Chap. 6 to Chap. 2.</i> Requiring: Addition of Definition for "Other Properties" Addition to Annex 1.2 And Further definitions of site and persons in .</p>																																																																																																																																																		
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<p align="center">JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS</p> <p>1. GENERAL REQUIREMENTS</p> <p>1.1 Safety Declaration</p> <p>1.1.1 Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.</p> <p>1.1.2 A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.</p> <p>NK: We consider the 1.1.2 is to be mentioned in Guidance. We propose to move 1.1.2 to Guidance1.3 and modify the 1.1.2 as follows:</p> <p><i>1.1.2 The Contractor shall take measures declared in the Contractor’s Safety Deflation.</i></p> <p><i>This is specifically a Bid form to be submitted with the Bid and the wording is correct. Actually, this does require a change to the JICA Standard Bidding Document as included in our earlier draft but JICA do not want to do this.</i></p> <p><i>I have modified the User Guide to state this but the same problem will arise, the User Guide requires the Executing Agency to change the Bidding Documents but the SBD prevent this.</i></p> <p><i>If JICA do not change the SBD this will continue to be a problem and for now all else must therefore be an unsatisfactory compromise.</i></p> <p>NK: NK inquired JICA whether it is not problem to include the form of Safety Declaration in the User Guide because the SBD does not allow addition.</p> <p>NK5/6YH: JICA did not response to the above inquiry. We will proceed as MD proposed.</p> <p>1.2 General Reference Notes</p> <p>1.2.1 For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].</p> <p>1.2.2 The following further general reference notes apply to the content of JSSS:</p> <ol style="list-style-type: none"> (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed. (2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data. (3) Any reference to “Contractor” within this document shall also be deemed to include “Subcontractor” and “Subcontractors”, for whom the Contractor shall remain fully responsible. 	<p align="center">JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 1: GENERAL REQUIREMENTS</p> <p>1. GENERAL REQUIREMENTS</p> <p>1.1 Safety Declaration</p> <p>1.1.1 Adopting the slogan “SAFETY FIRST”, the Contractor shall proactively aim to achieve “Zero-Accident” by applying the highest achievable standards of health and safety management.</p> <p>1.1.2 A Safety Declaration shall be submitted with the Bid, declaring the Bidder’s commitments and obligations, in accordance with JSSS Annex 1.3 [Additional Contractor Forms], Form JSSS/BSD - Bidder’s Safety Declaration.</p> <p>1.2 General Reference Notes</p> <p>1.2.1 For Definitions, abbreviations and standards contained in JSSS, refer to JSSS Annex 1.1 [Definitions and Abbreviations].</p> <p>1.2.2 The following further general reference notes apply to the content of JSSS:</p> <ol style="list-style-type: none"> (1) References to “Bid” and “Contract” and to “Bidder” and “Contractor” shall be interchangeable according to the context of their use. “Bid” and “Bidder” shall become “Contract” and “Contractor” after the Contract Agreement has been executed. 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(2) References to “Laws of the Country” shall include all safety standards under such Laws and shall also include references to Laws of any other jurisdiction that may be stated in the Contract Data. (3) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”. (4) Any reference to academic, educational or vocational qualification within this document, shall mean a valid qualification demonstrated by a certified true copy of a diploma, degree, or other official

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<p>(4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.</p> <p>(5) Any reference to academic, educational or vocational qualification of Contractor’s Personnel within this document and unless otherwise stated, shall mean a currently valid academic, educational or vocational qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country in respect of a person who has successfully finished a course of comprehensive education and training by that institution or an equivalent alternative diploma, degree, or other official certification issued by an acknowledged educational institution of another country and whom the Contractor has ascertained is sufficient and to whom the Engineer has given consent if the latter is a requirement of the Contract.</p> <p>(6) Unless otherwise stated in JSSS or the context is otherwise clear, (JC1) any reference in JSSS requiring the provision by the Contractor of health and safety measures for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of the same such health and safety measures for Employer’s Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.(JC2)</p>	<p>(4) Any reference to “Safety” unless otherwise evident from the text shall also be construed as reference to “Health and Safety”.</p> <p>(5) Any reference to academic, educational or vocational qualification within this document, shall mean a valid qualification demonstrated by a certified true copy of a diploma, degree, or other official certification issued by an acknowledged educational institution of the Country or an equivalent alternative certification issued by an acknowledged educational institution of another country.</p> <p>(6) Unless otherwise stated in JSSS or the context is otherwise clear, any reference in JSSS requiring the provision by the Contractor of health and safety measures and facilities for Contractor’s Personnel shall also be deemed to include the provision by the Contractor of the same health and safety measures and facilities for Employer’s Personnel and all other persons that are entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.</p>	<p>certification issued by an acknowledged educational institution of the Country or an equivalent alternative certification issued by an acknowledged educational institution of another country.</p> <p>(5) Unless otherwise stated in JSSS, any reference in JSSS to the Site, shall also be deemed to include other places (if any) where the Contractor intends to execute or is executing the Works including for example offsite storage, fabrication and assembly areas and any other working areas outside the Site boundary.</p> <p>(6) JSSS requires the provision of safety management services and facilities by the Contractor to Contractor’s Personnel and unless otherwise stated this shall also be deemed to include the provision by the Contractor of the same services and facilities (including for example training, accident response, healthcare, records, reports, control of hazards and risks, use of Temporary Works, and the like) to any subcontractors, suppliers and others for whom the Contractor is responsible including Employer’s Personnel and all other persons that are entitled to be on the Site.</p>
<p>NK: There are many descriptions of “other the Site areas (if any) where the Works are being executed” in JSSS. GC defines as 1.1.6.7 “Site” means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.(NKのコメントにより、すでに削除済ですが、Q&Aは残しました。)</p> <p>May we know the following?</p> <p>Q1: Which places you are assuming as other places?</p> <p>Q2: Are other places specified in the Particular Safety Specification?</p> <p>Other places may be specified in the Contract as forming part of the Site such as offsite storage areas provided by the Employer or Employer’s and Engineer’s compounds and facilities all of which may be remote from the Site but for which the Contractor still has the usual obligations such as care, insurance, maintenance, etc.</p> <p>This is obviously creating difficulty with interpretation, so I have deleted all such reference in JSSS and it now it constantly refers to the Site only. This will also be considered for mention in the User Guide.</p> <p>JC1: In this chapter 1, the expression “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site” which is very long, and would be even longer with our next comment, is sometimes observed. NK with MD may wish to choose one of the following options, whichever is better:</p> <p>1. With this additional wording, simply say “the Contractor’s Personnel” or</p> <p>2. Without this additional wording, every time repeat “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.”</p> <p>NK5/6YH: NK would like to select the 1 above for JSSS:</p> <p>JC2: Safety measures are needed not only in the Site.</p> <p>We would like to have advice of NK/MD. The current draft JSSS says:</p> <p>A: the Site (very often) and</p> <p>B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)</p> <p>Safety measures are needed not only in the Site but other working areas the</p>		

コメントの追加【伊藤1】: In this chapter 1, the expression “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site” which is very long, and would be even longer with our next comment, is sometimes observed.

NK with MD may wish to choose one of the following options, whichever is better:

1. With this additional wording, simply say “the Contractor’s Personnel” or

2. Without this additional wording, every time repeat “all Contractor’s Personnel, Employer’s Personnel and other persons entitled to be on the Site and other places (if any) where the Contractor intends to execute the Works.”

コメントの追加【岡本2】: Safety measures are needed not only in the Site.

We would like to have advice of NK/MD. The current draft JSSS says:

A: the Site (very often) and

B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of “the Site” in JSSS now should be modified as B above.

Therefore, it seems to us wise to add an interpretation of the “Site” in 1.2.2, for example:

“Unless otherwise stated in JSSS or the context is otherwise clear, “Site” used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works”.

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

<p>Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above.</p> <p>Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:</p> <p>"Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works."</p> <p>Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.</p> <p>Otherwise, we may repeat "the Site and other places (if any) where the Contractor intends to execute the Works" every time. But this is too long, so a bit awkward. How do you think?</p> <p>NK5/6YH: NK would like to ask MD to review and select proper wording for JSSS:</p> <p>(7) Any reference in JSSS to "relevant authority" or "relevant authorities" shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.</p> <p>(8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Project shall apply equally and are used in JSSS.</p> <p>Unless specified otherwise or instructed by the Engineer, the revision and issue of JSSS to be used for the Project shall be that applicable at the Base Date.</p>	<p>(7) Any reference in JSSS to "relevant authority" or "relevant authorities" shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.</p> <p>(8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Contract, apply equally and are used in JSSS.</p> <p>Unless specified otherwise or instructed by the Engineer, the issue of JSSS to be used for the Contract shall be that applicable at the Base Date.</p>	<p>(7) Any reference in JSSS to "relevant authority" or "relevant authorities" shall mean one or more legally constituted public authorities that own or have legal jurisdiction over the work or property concerned.</p> <p>(8) JSSS shall form a part of the Contract for the Works and therefore the definitions contained in the Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer, Multilateral Development Bank Harmonised Edition June 2010, General Conditions together with the Particular Conditions Part A - Contract Data and Part B - Specific Provisions, as applied to that Contract, apply equally and are used in JSSS.</p> <p>Unless specified otherwise or instructed by the Engineer, the issue of JSSS to be used for the Contract shall be that applicable at the Base Date.</p> <p>(NK注:下記の Project Safety Specification は、User Guide への JICA コメントに従い Project を DFR 版では削除しております。)</p>
<p>1.3 Incorporation of JSSS into the Contract</p> <p>1.3.1 JSSS shall form a part of the Project Safety Specification, as defined in Annex 1.1, which in turn forms a part of the Specification. The "Project Safety Specification" shall have priority over the other parts of Specification in respect of health and safety matters. Within the "Project Safety Specification" the Particular Safety Specification shall have priority over JSSS, as illustrated in Annex 1.4: (Figures and Illustrations), Fig A1.4.1 (Incorporation of JSSS in Bid and Contract Documents) and as follows: (JC3)</p> <p>1.3.2 JSSS shall be included as a part of the Specification for the Works, which shall be subdivided into two parts namely:</p> <p>1.3.3 The Project Safety Specification (including JSSS), and</p> <p>1.3.4 The Technical Specification</p> <p>1.3.5 The priorities of the document comprising the Specification are as follows:</p> <p>1.3.6 Within the "Project Safety Specification" the Particular Safety Specification shall have priority over JSSS.</p> <p>1.3.7.1.3.1 The "Project Safety Specification" shall have priority over the Technical Specification in respect of health and safety matters.</p> <p>NK: Q1: We think it needs to explain/define "Technical Specification" as same as User Guide 1.3.2 (3) The "Technical Specification" shall comprise the specification for the general and technical aspects of the Works, excluding requirements for health and safety.</p>	<p>1.3 Incorporation of JSSS into the Contract</p> <p>1.3.1 JSSS shall form a part of the Project Safety Specification which, in turn forms a part of the Specification. The Project Safety Specification shall have priority over the other parts of the Specification in respect of health and safety matters. Within the Project Safety Specification, the Particular Safety Specification shall have priority over JSSS.</p> <p>1.3.2 The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.</p>	<p>1.3 Incorporation of JSSS into the Contract</p> <p>1.3.1 JSSS shall form a part of the Project Safety Specification which, in turn forms a part of the Specification. The Project Safety Specification shall have priority over the other parts of the Specification in respect of health and safety matters. Within the Project Safety Specification, the Particular Safety Specification shall have priority over JSSS.</p> <p>1.3.2 The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.</p>

- コメントの追加 [SS71]: May "that" be replaced "the"?
- コメントの追加 [MJD72R71]: No change necessary it is correct structure and wording
- コメントの追加 [SS73]: I cannot understand the meaning of "that". May "that" be deleted?
- コメントの追加 [MJD74R73]: It is OK but I have added, that, which is applicable
- コメントの追加 [SS75]: JICA commented to delete "Project" in User Guide". Please kindly delete "Project".
- コメントの追加 [MJD76R75]: Thank you, adjusted already
- コメントの追加 [岡本3]:
- Better to avoid using "Technical specification"
- Fig A1.4.1 moved to User Guide
- コメントの追加 [SS77]: JICA commented to delete "Project" in User Guide". Please kindly delete "Project".
- コメントの追加 [MJD78R77]: Thank you, adjusted already

<p><i>Yes I agree but the problem again is that "Specification" is already defined in the General Conditions of Contract and any change should be therefore be through a Particular Conditions change but JICA do not want this.</i></p> <p><i>I have added the explanation as above but please note that this is a compromise.</i></p> <p>Q2: Is "other parts of" necessary? <i>Thank you and no, it isn't. see above. (Already deleted.)</i></p> <p>IC3: Better to avoid using "Technical specification" <i>Fig A.1.4.1 moved to User Guide</i></p> <p>NK5/6: No comment to JC because JICA want to modify as they commented.</p> <p>1.3.8 1.3.2 The Annexes to Chapter 1: General Requirements shall be read and construed as an integral part of JSSS.</p> <p><i>I recommend that the following is necessary (JC4)</i></p> <p><i>The User Guide shall not form a part of the Contract.</i></p>	<p>1.4 Compliance with JSSS and Other Regulations</p> <p>1.4.1 JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.</p> <p>1.4.2 JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.</p> <p>1.4.3 The Contractor shall comply fully with the requirements of the Project Safety Specification.</p>	<p>1.4 Compliance with JSSS and Other Regulations</p> <p>1.4.1 JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.</p> <p>1.4.2 JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.</p> <p>1.4.3 The Contractor shall comply fully with the requirements of the Project Safety Specification.</p>
<p>NK: MD proposed the addition above. NK considers it is not necessary. IC4: Not necessary. NK5/6: Deleted as commented.</p> <p>1.4 Compliance with JSSS and Other Regulations</p> <p>1.4.1 JSSS specifies the minimum health and safety requirements to be complied with by the Contractor throughout the execution of the Works.</p> <p>1.4.2 JSSS shall not limit the Contractor's statutory or regulatory duties and responsibilities under the Laws of the Country and/or the specific health and safety requirements of the Contract.</p> <p>1.4.3 The Contractor shall comply fully with the requirements of JSSS Projectas supplemented and modified by the Particular Safety Specification.</p> <p>1.4.4 Compliance with JSSS shall not impose or imply any role or responsibility upon the Employer or the Employer's Personnel for health and safety or management of the Works all of which is to be performed by the Contractor in accordance with the Contract. (JC5)</p>	<p>1.4.4 If there are no or insufficient safety provisions in the Laws of the Country, in JSSS or in the Particular Safety Specification for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent.</p> <p>1.4.5 Specified Standards</p>	<p>1.4.4 If there are no or insufficient safety provisions in the Laws of the Country, in JSSS or in the Particular Safety Specification for the particular part of the Works, the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent.</p> <p>1.4.5 Specified Standards</p>
<p>IC5: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.</p> <p>NK5/6: Will modify as commented.</p> <p>1.4.5 Where JSSS and the Particular Safety Specification contain insufficient or no safety regulations for any part of the Works, the Laws of the Country shall apply. (JC6)</p> <p>NK: 1.4.5 seems duplicate with GC 1.13 Compliance with Laws: The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions. Is 1.4.5 necessary?</p> <p><i>It is intended to be for the situation where JSSS has been agreed to be use, but it is lacking in some areas in which case we use the Laws.</i></p> <p>IC6: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6.</p> <p>NK5/6: Will delete as commented.</p>		
<p>1.4.6 If, for the particular part of the Works, the Project Safety Specification does not contain safety requirements and there are no safety regulations contained in the Laws of the Country for the particular part of the Works, the Contractor shall propose suitable safety measures in the Safety Plans internationally acceptable safety regulations for the Engineer's consent. These may contain proposing application of internationally recognised standard or regulation.</p> <p>NK: Is 1.4.6 new clause to specify regulations? May we know the reason of addition?</p>	<p>(1) Unless otherwise instructed by the Engineer, a reference to any standard (hereinafter deemed to include specified safety</p>	<p>(1) Unless otherwise instructed by the Engineer, a reference to any standard (hereinafter deemed to include specified safety</p>

コメントの追加 [伊藤4]: Not necessary

コメントの追加 [岡本5]: Not very clear, thus not necessary. If this is to say any act by the Engineer shall not relieve the Contractor from his responsibility, such statement already exists in GC 3.1.

コメントの追加 [岡本6]: The Law of the Country shall be respected in any case, and that is specified in 1.4.2. See also our modification to 1.4.6

<p>It is intended for use where we have dropped back to the Laws but there are no particular Laws available.</p> <p>have no objection if both are deleted.</p> <p>NK: NK propose to combine 1.4.5 and 1.4.6 below.</p> <p>If there are no or insufficient safety provisions in the Laws of the Country and in JSSS and the Particular Safety Specification for the particular part of the Works, and if the Contractor shall propose suitable internationally acceptable safety regulations for the Engineer's consent. (subject to MD's review.)</p> <p>There is no JICA comment to the above.</p> <p>1.4.1. Specified Standards and Regulations (JC7)</p> <p>JC7: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.</p> <p>NK5/6: YH think these regulations do not include the law. To MD, please review this comment and sentences.</p> <p>(1) Unless otherwise instructed by the Engineer, any reference standard or regulation shall mean a reference to the latest issued edition of that standard or regulation as at the Base Date. (JC8)</p>	<p>regulations or codes) shall mean a reference to the latest issued edition of that standard as at the Base Date of the Contract.</p> <p>(2) Any standard specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard specified.</p> <p>(3) Application of detailed parts of any standards specified in JSSS may be waived at the formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.</p>	<p>regulations or codes) shall mean a reference to the latest issued edition of that standard as at the Base Date of the Contract.</p> <p>(2) Any standard specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard specified.</p> <p>(3) Application of detailed parts of any standards specified in JSSS may be waived at the formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.</p>
<p>JC8: Better to add this in the main text of JSSS as mentioned in A1.1.5</p> <p>NK5/6: YH think these regulations do not include the law. We would like to ask MD to review this.</p> <p>(2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.</p> <p>(3) Application of detailed parts of standard or regulation specified in JSSS may be waived at a formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request. (JC9)</p>	<p>(4) Where JSSS refers to the standards of other countries, such reference is only to the technical requirements contained in such standards and not to any related laws or legal enforceability of any of those other countries.</p> <p>1.4.6 Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".</p> <p>1.4.7 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:</p> <p>(1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.</p> <p>(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear.</p>	<p>(4) Where JSSS refers to the standards of other countries, such reference is only to the technical requirements contained in such standards and not to any related laws or legal enforceability of any of those other countries.</p> <p>1.4.6 Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".</p> <p>1.4.7 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:</p> <p>(1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.</p> <p>(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear.</p>
<p>JC9: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of "waiver" should be provided.</p> <p>NK5/6: Will modify as commented.</p> <p>(4) Where JSSS refers to the standards and regulations of other countries, such reference is only to the technical requirements contained in such standards and regulations and not to the related laws or legal enforceability of any of those other countries.</p> <p>1.4.7 Where there is any reference to OSHA and unless otherwise evident from the text, the words "team leader", "on-site supervisor", "on-site supervision", "field superintendent", "work chief" and the like shall be collectively construed as reference to the appropriate member of the Contractor's Personnel, any reference to the "safety and health manager of the Contractor" and the like shall be construed as reference to the HSO and "The construction plan and safety and health plan", shall be construed as the "Safety Plan".</p>	<p>1.4.8 The Contractor shall comply with the requirements of JSSS throughout the Time for Completion and the Defects Notification Period.</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor's obligations to provide temporary services and facilities shall finish at the end of the Time for Completion.</p>	<p>1.4.7 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:</p> <p>(1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.</p> <p>(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear.</p> <p>1.4.8 The Contractor shall comply with the requirements of JSSS throughout the Time for Completion and the Defects Notification Period.</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor's obligations to provide temporary services and facilities shall finish at the end of the Time for Completion.</p>

コメントの追加 [伊藤7]: We believe this 1.4.6 treats OSHA, BS, ISO, etc. which are mentioned in JSSS. Is our understanding right? If so, we just want to make sure that the word "regulation" will not induce misunderstanding that it includes Law of the Country.

コメントの追加 [J8]: Better to add this in the main text of JSSS as mentioned in A1.1.5

コメントの追加 [伊藤9]: We are afraid that OSHA, in particular, contains very detailed requirements some of which may be relevant in American context but not anywhere else. As discussed at the last meeting with MD, we believe that this kind of "waiver" should be provided.

<p>1.4.8 If any ambiguity or discrepancy is found in or between the various Chapters of JSSS or any reference documents and JSSS, the Engineer shall issue any necessary clarification or instruction. For the purposes of interpretation:</p> <p>(1) The requirements of Chapter 1: General Requirements, shall prevail over the requirements of other Chapters of the document.</p> <p>(2) JSSS Chapters 2 to 6 contain requirements which are of general application and the content of each shall apply to content of all others unless otherwise stated or unless the context is otherwise clear. (JC10)</p>		
<p>JC10: We don't really understand the meaning of this. NK5/6: YH considers this cannot be understood. To MD, please review this sentence.</p>		
<p>1.4.9 Unless otherwise specified in the Particular Safety Specification, the Contractor shall comply with the requirements of JSSS throughout the Time for Completion and Defect Notification Period. <i>during any additional period(s) within the Defects Notification Period when the Contractor may be completing any outstanding work or remedying any defective work and as may be further specified in the Particular Safety Specification.</i> (JC11)</p> <p>NK: We consider that this phrase may be changed to "and the Defects Notification Period"? (Though the phrase is correctly expressed.)</p> <p><i>No, your suggested change would not be correct this has been especially drafted following IICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).</i></p> <p><i>The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer's property except as stated in this clause.</i></p> <p>NK: we agree to leave this as specified.</p> <p>JC11: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.</p> <p>With this modification, Particular Safety Specification in User Guide will not be necessary any more.</p> <p>NK5/6: Will modify as commented.</p>	<p>1.4.9 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.</p> <p>1.5 Contractor's Safety Management System</p> <p>1.5.1 The Contractor shall institute a health and safety management system in accordance with ISO 45001 or an equivalent alternative.</p> <p>1.5.2 Alternatively, the Contractor may institute his own safety management system and regularly conduct audits in accordance with JSSS 1.17 [Compliance Monitoring and Auditing].</p> <p>1.5.3 The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.</p>	<p>1.4.9 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.</p> <p>1.5 Contractor's Safety Management System</p> <p>1.5.1 The Contractor shall institute a health and safety management system in accordance with ISO 45001 or an equivalent alternative.</p> <p>1.5.2 Alternatively, the Contractor may institute his own safety management system and regularly conduct audits in accordance with JSSS 1.17 [Compliance Monitoring and Auditing].</p> <p>1.5.3 The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.</p>
<p>No, your suggested change would not be correct this has been especially drafted following IICA comment in January. The Contractor has no continuous automatic obligation throughout the DNP. Upon Taking Over the works are finished except for any agreed and minor outstanding works and rectification of defects. The Employer takes over all responsibility for the Works as it his property, he is insuring and he is responsible for the safety of all persons on his property. All temporary facilities should have been removed before this unless specifically described otherwise in the Contract (Particular Safety Specification).</p> <p>The Contractor actually has very limited responsibilities for his own employees when they are engaged upon the Employer's property except as stated in this clause.</p> <p>NK: we agree to leave this as specified.</p> <p>JC11: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.</p> <p>With this modification, Particular Safety Specification in User Guide will not be necessary any more.</p> <p>NK5/6: Will modify as commented.</p>		
<p>1.4.10 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.</p> <p>1.5 Contractor's Safety Management System</p> <p>1.5.1 The Contractor shall institute a health and safety management system in accordance with OHSAS 18001 or ISO 45001:2018. (JC11a) The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.</p> <p>JC11a: OHSAS does not exist any more? Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.</p> <p>NK5/6: OHSAS18001 will be expired on March 11, 2012. To MD, do we make note till the expiry date? NK agreed to delete the year.</p> <p>1.5.2 The Contractor shall state the applicable standard in the Contractor's Safety Plan. (JC12)</p> <p>JC12: If delete OHSAS above, delete accordingly.</p>	<p>1.5.3 The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.</p> <p>1.6 Checking and Validation of Submissions</p> <p>1.6.1 In accordance with GC 4.9 [Quality Assurance] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary</p>	<p>1.5.3 The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent.</p> <p>1.6 Checking and Validation of Submissions</p> <p>1.6.1 In accordance with GC 4.9 [Quality Assurance] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting</p>
<p>1.4.10 The Contractor shall fully inform his personnel, his Subcontractor's, suppliers and sub-consultants and all other parties who are associated with the Works of the existence, content, purpose and objectives of JSSS.</p> <p>1.5 Contractor's Safety Management System</p> <p>1.5.1 The Contractor shall institute a health and safety management system in accordance with OHSAS 18001 or ISO 45001:2018. (JC11a) The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation.</p> <p>JC11a: OHSAS does not exist any more? Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.</p> <p>NK5/6: OHSAS18001 will be expired on March 11, 2012. To MD, do we make note till the expiry date? NK agreed to delete the year.</p> <p>1.5.2 The Contractor shall state the applicable standard in the Contractor's Safety Plan. (JC12)</p> <p>JC12: If delete OHSAS above, delete accordingly.</p>	<p>1.6 Checking and Validation of Submissions</p> <p>1.6.1 In accordance with GC 4.9 [Quality Assurance] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary</p>	<p>1.6 Checking and Validation of Submissions</p> <p>1.6.1 In accordance with GC 4.9 [Quality Assurance] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting</p>

コメントの追加 [岡本10]: We don't really understand the meaning of this. ?????

コメントの追加 [伊藤11]: We are afraid that our intention was not very much understood by NK/MD. At any time during DNP, the Contractor may be required to intervene for repair. So safety measures must continue to be kept during all DNP.

With this modification, Particular Safety Specification in User Guide will not be necessary any more.

コメントの追加 [伊藤12]: OHSAS does not exist any more??

Necessary? If we amend 1.4.7 (1) as above, the year of publication is not needed.

コメントの追加 [伊藤13]: If delete OHSAS above, delete accordingly.

<p>1.5.3 NK5/6: To MD, please review this.</p> <p>1.5.41.5.3 The Contractor shall submit original or certified true copies to the Engineer of his current certification of compliance with such standard issued by an acceptable organisation. Alternatively, instead of complying with JSSS 1.5.1 above, the Contractor may institute a safety management system by himself and regularly conduct audits in accordance with JSSS 1.17. (JC13)</p> <p>JC13: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.</p> <p>NK5/6: Will modify as commented.</p> <p>1.5.51.5.4 The safety management system shall be proposed as a part of the Contractor's Safety Plans to the Engineer for his consent. -</p> <p>NK: JICA deleted 1.5.3 in the last comment because JICA wants for the Contractor to institute and operate HS management system but not request submission of certification. (actually and practically certificate is not much important). We think 1.5.3 should be deleted.</p> <p>I have deleted the requirement with the Bid (see Annex 1.3), however if the contractor is to comply with a scheme how does the Engineer know which scheme and how to verify compliance?</p> <p>It has no little or no meaning otherwise.</p> <p>NK: JICA intention is only to apply the safety management system excluding the certification and auditing by the certification body. Therefore, 1.5.3 is considered not request certification. To JICA, is this understanding correct?この考え方で正しいでしょうか?</p> <p>1.6 Checking and Validation of Submissions</p> <p>1.6.1 In accordance with GC 4.9 [Quality Assurance] the Contractor shall demonstrate compliance with the Contract by including evidence of his own internal prior review, check and approval or agreement of all submissions including Safety Plans, Method Statements, Temporary Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination (JC13a), design and supervision staff and any independent checkers as appropriate.</p> <p>NK: Is this correct that we think 1.6.1 is added in relation with design of TW, etc.?</p> <p>Not only TW it also applies to his Safety Plans, Method statements, any shop or working drawings. In fact any Contractor submissions are stated.</p> <p>JC13a: coordinator.</p> <p>NK5/6: We think so.</p> <p>① For the purposes of interpretation for JSSS, the final paragraph of GC 1.8 [Care and Supply of Documents] shall not apply to submissions of the Contractor including the examples provided in the foregoing paragraph for which the Contractor will be deemed to have carried out all necessary internal checking and validation and for which the Contractor shall remain responsible. (JC14)</p> <p>NK: We think JICA will not accept 1.6.2 because GC does not describe exception of the MS in GC 1.8. This was discussed with you and Mr Hayashi in last January. We want not include 1.6.2.</p> <p>This is a problem resulting from the refusal to issue PC changes and it is a compromise which is aimed to cover the risk of potential claims that JICA may have to fund. I believe that with the increased amount of submissions such as method statements, safety plans and temporary works details, there is an increased possibility that the Engineer could comment but chooses not to or even overlooks or misses, errors. If</p>	<p>Works (such as drawings, designs and calculations) and of all supporting documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination, design and supervision staff and any independent checkers as appropriate.</p> <p>1.7 Contractor's Safety Plans</p> <p>1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:</p> <ol style="list-style-type: none"> (1) That are stated in JSSS. (2) That comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract. (3) That are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel. <p>1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:</p> <ol style="list-style-type: none"> (1) Bid Stage Safety Plan (Outline Overall Safety Plan). (2) Commencement Stage Safety Plan (Updated Bid Stage Safety Plan). 	<p>documents, through written confirmation and signature of each of the Contractor's responsible personnel, including for example the Contractor's Representative, HSO, Temporary Works coordination, design and supervision staff and any independent checkers as appropriate.</p> <p>1.7 Contractor's Safety Plans</p> <p>1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:</p> <ol style="list-style-type: none"> (1) That are stated in JSSS. (2) That comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract. (3) That are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel. <p>1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:</p> <ol style="list-style-type: none"> (1) Bid Stage Safety Plan (Outline Overall Safety Plan). (2) Commencement Stage Safety Plan (Updated Bid Stage Safety Plan).
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コメントの追加【伊藤14】: Imposing ISO 45000 is not realistic. We should give an alternative to the Contractor.

コメントの追加【伊藤15】: coordinator

<p>this happens there is the risk of avoiding responsibility if an error or defect (what is this?) should have been discovered. (JC14)</p> <p>It is a strange but potentially onerous obligation that is inconsistent with GC 4.9 even if 1.8 does not state the consequences. GC 1.8 states: "If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect."</p> <p>JC14: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1). Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor. We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".</p> <p>NK5/6: Will modify as commented.</p> <p>1.7 Contractor's Safety Plans</p> <p>1.7.1 The Contractor shall prepare Safety Plans for the Works showing the Contractor's proposed health and safety management policies, systems and plans specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>1.7.2 The Safety Plans shall set out or refer to all the health and safety requirements:</p> <ol style="list-style-type: none"> (1) that are stated in JSSS; (2) that comply with the Contractor's health and safety obligations under the Laws of the Country and the Contract; and (3) that are necessary to effect and maintain a healthy and safe working environment for all Contractor's Personnel, Employer's Personnel and other persons entitled to be on the Site. (JC15) <p>JC15: See 1.2.2 (6).</p> <p>NK5/6: No comment.</p> <p>1.7.3 The Contractor shall be required to prepare and submit the Safety Plans principally at three stages:</p> <ol style="list-style-type: none"> (1) Bid Stage Safety Plan (Outline Overall Safety Plan). (2) Commencement Stage Safety Plan (Updated Overall Bid Stage Safety Plan) (3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works) <p>NK: Is it not necessary to mention "Updated"? We think first and updated separate plans are necessary.</p> <p>don't quite understand your comment, the Bid Stage Plan is followed by an updated plan after Commencement but this is still an early plan and the same plan (or parts of it) will probably require to be further revised and updated as the detail of works develop and before any parts of the works commence.</p> <p>NK: We understand your meaning.</p> <p>1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level. throughout the Time for Completion of the Works.</p> <p>1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by</p>	<p>(3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works.</p> <p>1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level.-</p> <p>1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility.</p> <p>1.7.6 Bid Stage Safety Plan:</p> <ol style="list-style-type: none"> (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [<i>Content of Bid Stage Safety Plan</i>]. (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated. <p>1.7.7 Commencement Stage Safety Plan</p> <ol style="list-style-type: none"> (1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site. (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works. (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract. 	<p>(3) Particular Safety Plans (Updated separate plans if necessary for particular parts of the Works.</p> <p>1.7.4 The Safety Plans shall ultimately provide an accurate and comprehensive description of the Contractor's arrangements to ensure that health and safety management is maintained at a high level.-</p> <p>1.7.5 Submission of any Safety Plan and inclusion in the Bid or Contract or any further submission to the Engineer, shall not place any limit upon the Contractor's obligations. Any additional requirements as determined by the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility.</p> <p>1.7.6 Bid Stage Safety Plan:</p> <ol style="list-style-type: none"> (1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [<i>Content of Bid Stage Safety Plan</i>]. (2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated. <p>1.7.7 Commencement Stage Safety Plan</p> <ol style="list-style-type: none"> (1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site. (2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works. (3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.
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コメントの追加【伊藤16】: Any act of the Engineer (or absence of act) does not relieve the Contractor from his responsibility (GC 3.1).
Any documents prepared and internally validated by the Contractor may contain errors and JICA expects the Engineer, as professional, to assume the role of "double checker" to a reasonable extent. Otherwise, any submission to the Engineer would be meaningless. This does not mean that JICA considers the Engineer should check all the documents prepared by the Contractor.
We think we should not excessively stick to the question of "from whom to whom the responsibility may be transferred".

コメントの追加【SS79】: May "Bid or" be deleted?
コメントの追加【MJD80R79】: Please do not change it, this has meaning. It means that whatever plan is included in the Bid may be change later if it found to be wrong

コメントの追加【伊藤17】: See 1.2.2 (6)

<p>the Contract or consequent to instructions of the Engineer or by requirements at the Site, shall be complied with by the Contractor under his own responsibility, and at any time throughout the Time for Completion of the Works.</p> <p>NK: Is it necessary to add "throughout the Time for Completion, during any additional period(s) within the Defects Notification Period and as may be further specified in the Particular Safety Specification" as mentioned in JSSS 1.4.10?</p> <p>Yes thank you, that is true, but better to delete the phrase rather than add.</p> <p>1.7.6 Bid Stage Safety Plan:</p> <p>(1) This shall be an outline plan, containing indicative content for all of the subjects listed in JSSS Annex 1.2 [Content of Bid Stage Safety Plan].</p> <p>(2) The plan shall demonstrate that the Bidder has a clear understanding of the health and safety requirements for the Works and contain clear and sufficient detail of each item to indicate the Bidder's intentions, so that this can be understood and properly evaluated.</p> <p>1.7.7 Commencement Stage Safety Plan</p> <p>(1) This shall be submitted within twenty-eight (28) days after the Commencement Date and not less than twenty-eight (28) days before commencing any work at the Site,</p> <p>(2) This shall be an updated Safety Plan for the whole of the Works showing the Contractor's proposed health and safety management policies, systems and plans etc. specifically prepared for all parts of the Works, the Site and other places (if any) where the Contractor intends to execute the Works.</p> <p>(3) The Commencement Stage Safety Plan shall be based upon the Bid Stage Safety Plan, further developed as necessary by the HSO to provide a comprehensive overall Safety Plan demonstrating the Contractor's intended compliance with the Contract.</p> <p>NK: Is it not necessary to specify to review Commencement Stage SP?</p> <p>Can we consider Commencement Stage SP is not be reviewed and the Engineer may review it and give comment in accordance with GC 1.8 Care and Supply of Documents though Japanese draft is specified to review it within 14 days?</p> <p>Just comment: I had modified the following clause 1.7.8 to deal with Particular Safety Plans. The Commencement Stage Safety plan is another contract stage submission subject to the same procedures so I have added it there.</p> <p>Please also note the above correction to the submission date of the plan which should be twenty-eight (28) days after the Commencement Date.</p> <p>1.7.8 Particular Safety Plans</p> <p>(1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.</p> <p>1.7.9 Procedures for Submission and Review</p> <p>(1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the whole and any part of the Works. [JC16]</p> <p>[JC16: Should it be "of the Works or any part thereof"?</p> <p>NK5/6: We agreed the above modification.</p>	<p>1.7.8 Particular Safety Plans</p> <p>(1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.</p> <p>1.7.9 Procedures for Submission and Review</p> <p>(1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the Works or any part of the Works.</p> <p>(2) The Contractor shall submit:</p> <p>(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan]; and</p> <p>(b) The Particular Safety Plans by the date fourteen (14) days prior to the commencement of each particular part of the Works where sufficient detail has not been included in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.</p> <p>(3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:</p> <p>(a) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;</p> <p>(b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does</p>	<p>1.7.8 Particular Safety Plans</p> <p>(1) These shall be prepared as necessary to suit changing circumstances or conditions at the Site, or following the issue of later Method Statements, or where considered necessary by the HSO or when required by the Engineer.</p> <p>1.7.9 Procedures for Submission and Review</p> <p>(1) The Contractor shall submit the Commencement Stage Safety Plan and the Particular Safety Plans showing details of the health and safety arrangements which the Contractor proposes to adopt for the execution of the Works or any part of the Works.</p> <p>(2) The Contractor shall submit:</p> <p>(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan]; and</p> <p>(b) The Particular Safety Plans by the date fourteen (14) days prior to the commencement of each particular part of the Works where sufficient detail has not been included in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.</p> <p>(3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:</p> <p>(a) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;</p> <p>(b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does</p>
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コメントの追加 [岡本18]: Should it be "of the Works or any part thereof"?

<p>(2) The Contractor shall submit</p> <p>(a) the Commencement Stage Safety Plan in accordance with JSSS 1.7.7 [Commencement Stage Safety Plan].</p> <p>(b) The Particular Safety Plans by the date 14 days before each particular parts of the Works starts to be executed, if no sufficient details are prescribed in the Commencement Stage Safety Plan and/or within fourteen (14) days after the date of the Engineer's request.</p> <p>NK Q1: We consider "the requested information" can be replaced with "Particular Safety Plans"?</p> <p>have changed this</p> <p>Q2: JSSS 1.6.6 of issue 6 specifies required information of (1) to (16) to be included in Particular SP.</p> <p>We consider it is better to specify the (1) to (16) in 1.7.8 for the Contractor can understand what they shall plan and Bid stage and Commencement stage SP are prepared as Outline Overall Safety Plan</p> <p>disagree; many of the items mentioned in Issue 6 are to be included in the Method statement and all other items are included in Annex 1.3 all of which will be progressively developed. There is no need to include additional information here</p> <p>NK: understand.</p> <p>(3) Requirements for response (if any) by the Engineer and any re-submission by the Contractor and, shall be as follows:</p> <p>(a) The Engineer may review the Safety Plans and may give notice of non-compliance to the Contractor stating the extent to which the Safety Plan does not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer;</p> <p>(b) If the Engineer gives no such notice of non-compliance for the original Safety Plan within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Safety Plan subject to complying with his other obligations under the Contract; and</p> <p>(c) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.</p> <p>1.7.10 The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p> <p>1.7.11 Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.</p>	<p>not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.</p> <p>1.7.10 The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of all persons entitled to be on the Site and other places (if any) where the Works are being executed and any damage to any property.</p> <p>1.7.11 Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.</p> <p>1.7.12 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.</p> <p>1.8 Risk Assessment</p> <p>1.8.1 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.</p> <p>1.8.2 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.</p> <p>1.8.3 The procedural flow of risk assessment shall be as follows.</p> <p>(1) Identifying hazards.</p> <p>(2) Evaluating risks.</p> <p>(3) Determining measures of risk reduction or elimination.</p> <p>1.8.4 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:</p> <p>(1) Removal of hazards such as eliminating dangerous methods of construction.</p> <p>(2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.</p> <p>(3) Engineering measures.</p> <p>(4) Management measures including improving skills with additional training.</p> <p>(5) Use of PPE.</p> <p>1.9 Contractor's Method Statements</p> <p>1.9.1 The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.</p> <p>1.9.2 Method Statements shall be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and include details of all</p>	<p>not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Safety Plan subject to his other obligations under the Contract.</p> <p>1.7.10 The Contractor shall, as stated in JSSS and as the Engineer may reasonably require, maintain records and make reports in compliance with the applicable health and safety regulations and Laws) concerning the health and safety of any persons entitled to be on the Site.</p> <p>1.7.11 Compliance with the Safety Plan and JSSS shall not relieve the Contractor from any duty, obligation or responsibility under or in connection with the Contract.</p> <p>1.7.12 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.</p> <p>1.8 Risk Assessment</p> <p>1.8.1 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.</p> <p>1.8.2 The Contractor shall fully inform all Contractor's Personnel of all hazards and risks on the Site.</p> <p>1.8.3 The procedural flow of risk assessment shall be as follows.</p> <p>(1) Identifying hazards.</p> <p>(2) Evaluating risks.</p> <p>(3) Determining measures of risk reduction or elimination.</p> <p>1.8.4 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:</p> <p>(1) Removal of hazards such as eliminating dangerous methods of construction.</p> <p>(2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment.</p> <p>(3) Engineering measures.</p> <p>(4) Management measures including improving skills with additional training.</p> <p>(5) Use of PPE.</p> <p>1.9 Contractor's Method Statements</p> <p>1.9.1 The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.</p> <p>1.9.2 Method Statements shall be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and include details of all</p>
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<p>1.7.12 The Contractor shall also consider the opinions of his workers and other Contractor's Personnel in preparing Safety Plans or updated Safety Plans.</p> <p>1.8 Risk Assessment</p> <p>1.8.1 In performing risk assessments, the Contractor shall find and correct all potential risks and hazards primarily by trying to eliminate or reduce such risks and hazards through making feasible changes in working conditions rather than relying on PPE.</p> <p>1.8.2 The Contractor shall fully inform all Contractor's Personnel, Employer's Personnel and all other persons who are entitled to be on the Site of all hazards and risks on the Site.</p> <p>1.8.3 The procedural flow of risk assessment shall be as follows.</p> <ol style="list-style-type: none"> (1) Identifying hazards. (2) Evaluating risks. (3) Determining measures of risk reduction or elimination. <p>1.8.4 The procedural flow for risk reduction measures shall be as follows with earlier listed items having higher priority:</p> <ol style="list-style-type: none"> (1) Removal of hazards such as eliminating dangerous methods of construction. (2) Changing to a safer construction method and alternating to low risk processes, operations, materials or equipment. (3) Engineering measures. (4) Management measures including improving skills with additional training. (5) Use of PPE. <p>NK: May we know what "improved PPE" mean? Deleted</p> <p>1.9 Contractor's Method Statements</p> <p>1.9.1 The Contractor shall prepare Method Statements for all parts of the Works with details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works and any parts of the Works.</p> <p>1.9.2 Method Statements shall be developed taking account of the results of risk assessment in accordance with JSSS 1.8 and (JC17) include details of all Permanent Works and Temporary Works with supporting documents such as:</p> <p>JC17: Better to have a linkage with the risk assessment NK5/6: Will modify as commented.</p> <ol style="list-style-type: none"> (1) Studies, investigations and designs. (2) Structural calculations and any other calculations. (3) Specifications and technical details. (4) Proposed construction procedure, sequence and method. (5) Construction resources including superintendents, workers, operation leaders and Contractor's Equipment. <p>NK: We consider "worker" will be used because it is used in other Chapter though FIDIC Changed</p>	<p>Permanent Works and Temporary Works with supporting documents such as:</p> <ol style="list-style-type: none"> (1) Studies, investigations and designs. (2) Structural calculations and any other calculations. (3) Specifications and technical details. (4) Proposed construction procedure, sequence and method. (5) Construction resources including superintendents, workers, operation leaders and Contractor's Equipment. (6) Inspection and monitoring plan. <p>1.9.3 The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.</p> <p>1.9.4 Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:</p> <ol style="list-style-type: none"> (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer. (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract. (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract. (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement 	<p>Permanent Works and Temporary Works with supporting documents such as:</p> <ol style="list-style-type: none"> (1) Studies, investigations and designs. (2) Structural calculations and any other calculations. (3) Specifications and technical details. (4) Proposed construction procedure, sequence and method. (5) Construction resources including superintendents, workers, operation leaders and Contractor's Equipment. (6) Inspection and monitoring plan. <p>1.9.3 The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.</p> <p>1.9.4 Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:</p> <ol style="list-style-type: none"> (1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer. (2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract. (3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract. (4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement
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コメントの追加 [SS81]: This will be revised "Operation Leader" as same as used other clauses..

コメントの追加 [MJD2R81]: Changed already

コメントの追加 [伊藤19]: Better to have a linkage with the risk assessment.

<p>uses "labour". It has been changed anyway but it now needs wider wording. Labour is also used in PDR.</p> <p>(6) Inspection and monitoring plan.</p> <p>1.9.3 The preparation of Method Statements shall indicate that the Contractor has put internal procedures in place to encourage the systematic approach to performing the Works and in an efficient, safe and environmentally compliant manner.</p> <p>1.9.4 Whenever required by the Engineer, the Contractor shall submit Method Statements showing details of the arrangements and methods which the Contractor proposes to adopt for the execution of any part of the Works. The Contractor shall submit the requested information within fourteen (14) days of the date of the Engineer's request.</p> <p>Requirements for submission by Contractor and response (if any) by the Engineer to Method Statements, shall be as follows:</p> <p>(1) The Engineer may review the Method Statements and may give notice of non-compliance to the Contractor stating the extent to which the Method Statements do not comply with the Contract. Within fourteen (14) days after receiving any such notice the Contractor shall rectify any non-compliance and resubmit to the Engineer.</p> <p>(2) If the Engineer gives no such notice of non-compliance for the original Method Statement within twenty-one (21) days of the date of receipt or for the resubmitted within fourteen (14) days of receipt, the Contractor shall proceed in accordance with the Method Statement subject to complying with his other obligations under the Contract.</p> <p>(3) For Contractor resubmissions following receipt of a notice of non-compliance, the Engineer may give notice to the Contractor stating the extent to which the resubmission does not comply with the Contract. Within fourteen (14) days after receiving this notice the Contractor shall rectify such non-compliance. If the Engineer gives no further notice of non-compliance within fourteen (14) days of the date of receipt of the resubmission, the Contractor shall proceed in accordance with the resubmitted Method Statement subject to his other obligations under the Contract.</p> <p>(4) The Contractor shall submit a revised Method Statement whenever required by the Engineer or when any previous Method Statement for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.</p> <p>(5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.</p> <p>NK: We consider "for his information" can be deleted because this phrase is not used for Safety Plan though Issue 6 used it. Change.</p> <p>1.10 Engineer's Safety Representative</p> <p>1.10.1 Unless otherwise specified in the Particular Safety Specification, the Engineer may delegate his power and authority to any of his assistant's delegated representative at the Site who (JC18) shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS. IC18: Particular Safety Specification is not necessary with this modification.</p>	<p>for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.</p> <p>(5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.</p> <p>1.10 Engineer's Safety Representative</p> <p>1.10.1 The Engineer may delegate his power and authority to any of his assistants at the Site who shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS.</p> <p>1.10.2 The terms of the appointment shall be in accordance with GC 3.2 [Delegation by the Engineer].</p> <p>1.10.3 Whenever the term "Engineer" is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.</p> <p>1.11 Safety Compliance Instructions from the Engineer</p> <p>1.11.1 Without affecting or diminishing the Contractor's responsibility under GC 4.1 [Contractor's General Obligations] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.</p> <p>1.11.2 If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [Suspension of Work] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.</p> <p>1.11.3 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [Suspension of Work] and not allow work to recommence until such time as:</p> <p>(1) The cause has been investigated and established by the Contractor.</p> <p>(2) Corrective and preventive measures have been formulated by the Contractor and proposed to the Engineer.</p> <p>(3) The Engineer's consent has been obtained for such measures.</p> <p>(4) The measures have been implemented to ensure that no such accident can recur.</p> <p>1.11.4 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.</p> <p>1.12 Health and Safety Officer at the Site (HSO)</p>	<p>for any part of the Works is inconsistent with actual conditions or requirements prevailing at the Site.</p> <p>(5) The Method Statement shall be revised as necessary by the Contractor or the HSO and each revision shall be submitted promptly to the Engineer.</p> <p>1.10 Engineer's Safety Representative</p> <p>1.10.1 The Engineer may delegate his power and authority to any of his assistants at the Site who shall act as the Engineer's health and safety representative for the purpose of complying with any health and safety obligations under JSSS.</p> <p>1.10.2 The terms of the appointment shall be in accordance with GC 3.2 [Delegation by the Engineer].</p> <p>1.10.3 Whenever the term "Engineer" is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.</p> <p>1.11 Safety Compliance Instructions from the Engineer</p> <p>1.11.1 Without affecting or diminishing the Contractor's responsibility under GC 4.1 [Contractor's General Obligations] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor's performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.</p> <p>1.11.2 If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [Suspension of Work] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer's consent and implemented such measures to ensure that no further risk exists.</p> <p>1.11.3 If an accident has occurred, the Engineer 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コメントの追加【伊藤20】: Particular Safety Specification is not necessary with this modification.

<p>NK5/6: Will modify as commented.</p> <p>1.10.2 The terms of the appointment shall be in accordance with GC 3.2 [Delegation by the Engineer].</p> <p>1.10.3 Whenever the term “Engineer” is used in JSSS this shall be deemed to include the resident engineer or any other assistant of the Engineer if so appointed in accordance with the terms of their delegated authority.</p> <p>1.11 Safety Compliance Instructions from the Engineer</p> <p>1.11.1 Without affecting or diminishing the Contractor’s responsibility under GC 4.1 [Contractor’s General Obligations] and to ensure the adequacy, stability and safety of all Site operations and of all methods of construction, the Engineer shall observe the Contractor’s performance at the Site and if in his opinion the Contractor is failing or has failed to carry out any part of the Works in accordance with the Safety Plan or other health and safety requirements of the Contract, the Engineer may give notice and instruct the Contractor to take necessary corrective and preventive measures to comply with the Contract.</p> <p>1.11.2 If any part of the Works is considered by the Engineer to pose a danger and which in his opinion could result in an accident, the Engineer may instruct the Contractor to suspend such part of the Works under GC 8.8 [Suspension of Work] until the Contractor has advised the Engineer of the proposed corrective and preventive measures, obtained the Engineer’s consent and implemented such measures to ensure that no further risk exists.</p> <p>1.11.3 If an accident has occurred, the Engineer may instruct the Contractor to suspend the Works or any part of the Works under GC 8.8 [Suspension of Work] and not allow work to recommence until such time as the cause has been investigated and established by the Contractor and corrective and preventive measures have been formulated, proposed such measures to the Engineer, obtained the Engineer’s consent and implemented such measures to ensure that no such accident can occur. (JC19)</p> <p>JC19: The sentence is not complete???</p> <p>NK5/6: To Md, please review the sentence.</p> <p>1.11.4 The actions arising as above irrespective of the issue of any action or instruction by the Engineer, shall be deemed to be the responsibility of the Contractor.</p> <p>1.12 Health and Safety Officer at the Site (HSO)</p> <p>1.12.1 For the purposes of interpretation under JSSS, the reference to “accident prevention officer at the Site” in GC 6.7[<i>Health and Safety</i>], shall be construed as “Health and Safety Officer at the Site”.</p> <p>NK: HSO is defined in A1.1.1(3), so can 1.12.1 be deleted? No. This is necessary to correspond to the definition. Please note that this is a compromise. PC change would have been preferable.</p> <p>1.12.2 Requirements for the HSO:</p> <p>(1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.</p> <p>(2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor’s Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable</p>	<p>1.12.1 For the purposes of interpretation under JSSS, the reference to “accident prevention officer at the Site” in GC 6.7[<i>Health and Safety</i>], shall be construed as “Health and Safety Officer at the Site”.</p> <p>1.12.2 Requirements for the HSO:</p> <p>(1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.</p> <p>(2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor’s Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.</p> <p>(3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety].</p> <p>(4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.</p> <p>(5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.</p> <p>(6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.</p> <p>(7) Where there is no legal requirement under the Laws of the Country and unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as:</p> <p>(a) an International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK; or</p> <p>(b) Certification as a Certified Safety Professionals (CSP) by the Board of Certified Safety Professionals (BCSP) in USA; or</p> <p>(c) an equivalent alternative internationally recognised qualification covering health and safety and risk management.</p>	<p>1.12 Health and Safety Officer at the Site (HSO)</p> <p>1.12.1 For the purposes of interpretation under JSSS, the reference to “accident prevention officer at the Site” in GC 6.7[<i>Health and Safety</i>], shall be construed as “Health and Safety Officer at the Site”.</p> <p>1.12.2 Requirements for the HSO:</p> <p>(1) The Contractor shall assign the HSO upon the Site of the Works, on or before the Commencement Date.</p> <p>(2) If the named person is for any reason unavailable or if the appointed person fails to act as HSO and is removed from the Site of the Works under GC 6.9 [Contractor’s Personnel], or if the person resigns and/or leaves the employment of the Contractor at the Site, the Contractor shall submit the name and particulars of a suitable and equally experienced and qualified replacement to the Engineer for his consent.</p> <p>(3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety].</p> <p>(4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.</p> <p>(5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.</p> <p>(6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.</p> <p>(7) Where there is no legal requirement under the Laws of the Country and unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as:</p> <p>(a) an International Diploma issued by the National Examination Board in Occupational Safety and Health (NEBOSH) in UK; or</p> <p>(b) Certification as a Certified Safety Professionals (CSP) by the Board of Certified Safety Professionals (BCSP) in USA; or</p> <p>(c) an equivalent alternative internationally recognised qualification covering health and safety and risk management.</p>
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コメントの追加 [岡本21]: The sentence is not complete???

- and equally experienced and qualified replacement to the Engineer for his consent.
- (3) The HSO shall be an employee of the Contractor or a specialist health and safety consultant and unless otherwise specified in the Particular Safety Specification, the HSO shall be assigned full time upon the Works and responsibilities, authority and duties shall be in accordance with GC 6.7 [Health and Safety].
 - (4) The Contractor shall not revoke the appointment of the HSO or appoint a replacement without the prior consent of the Engineer.
 - (5) The HSO shall possess appropriate educational qualification for such position and also (if so required by the Laws of the Country) shall be licensed or registered in the Country and perform such duties as are legally mandated.
 - (6) The HSO shall where possible be fluent in the ruling language of the Contract and also the language for communications stated in the Contract as defined in GC 1.4 [Law and Language], it is acceptable for the HSO to use a translator for either or both of these languages.
 - (7) ~~Where there is no legal requirement under the Laws of the Country, the HSO shall have appropriate academic, educational or vocational qualification such as that issued by the National Examination Board in Occupational Safety and Health (NEBOSH) Level 6 Diploma level or an equivalent alternative internationally recognised qualification covering health and safety and risk management. (JC20)~~

Where there is no legal requirement under the Laws of the Country or unless otherwise specified in the Particular Safety Specification, the HSO shall have appropriate academic, educational or vocational qualification such as that ~~International Diploma~~ issued by the National Examination Board in Occupational Safety and Health (NEBOSH) ~~in UK Level 6 Diploma level~~ or Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) in USA or an equivalent alternative internationally recognised qualification covering health and safety and risk management.

JC20: To NK, Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia)

NK5/6: We rechecked the qualification of HSO required in the world and tabulated below:

No	Country	Law/Regulation	Title	Requirements	Work Experience	
1	Japan	Ordinance on Industrial Safety and Health	Safety Officer	1. Trained personnel for 9 hrs training course, or other courses	University or technical college	in S&H 2 years
					science course	4 years
					other courses	
				Senior high school	in S&H 4 years	
				science course	6 years	
				other courses		
				Others	in S&H 7 years	
				2. Industrial safety consultants.		

コメントの追加【岡本22】: To NK: Please check if NEBOSH level 6 or equivalent qualification is not too high (taking account of the reality under projects financed by JICA, in particular in Asia)

2	USA	OSHA APPENDIX C TO §1926.65 COMPLIANCE GUIDELINES 1.Occupational Safety and Health Program. U.S. Army Corps of Engineers, EM-385	e.g. Certified Safety Professionals (CSP) by Board of Certified Safety Professionals (BCSP) The Safety and Health Manager shall be the CSP	CSP 1) Bachelor's degree, and 2) BCSP Qualified Credential (e.g. NEBOSH National or International Diploma in Occupational Health and Safety) 3) CSP examination	4 years of safety experience
3	UK	Internet Information	Environmental Health and safety manager	1) Bachelor's degree in Safety Engineering, etc. 2) National/International Diploma 1. NEBOSH National Diploma in Occupational Health and Safety. 2. British Safety Council Level 6 Diploma in Occupational Safety and Health., etc.	5 years related experience in environmental health and safety.
4	Singapore	Regulations	1)Representative of the Contractor 2)Safety Supervisor	1) Training and exam. of 3 days 2) Training of 10 hrs per week for 6 months (60 hrs)	
5	India	Regulation	1)Safety Officer 2)Safety Staff	1) Graduation of safety course more than 2 years in college 2) Training course	
6	Thailand	Regulation	1)Head Man Level 2)Technique Level 3)High Technique Level 4)Professional Level 5)Management Level	1) 12 hr training 2) Ditto 3) 180 hr training 4) Graduation of Occupational health bachelor course, or person trained & passed exam. or safety officer of 5 years experience and trained & passed exam. 5) 12 hr training	
7	Indonesia	Regulation	Occupational Health and safety Expert	10 days (90 hrs) training	
8	Vietnam	Regulation	Not found yet.		

NK: We found each country has its regulation regarding qualification of Safety Officer. Japanese one is almost same level as Head Man Level and Technique Level in Thailand.

In Japanese regulation, the Project Manager shall be a General Safety and Health Manager and supervise the Safety officer(s). Japanese contractors may not assign Japanese engineers directly as HSO though they have experience and knowledge of safety management in construction sites and also ability to manage safety in ODA projects. However, they have no academic certificates in Japan and also international training certificates. The Japanese contractors who work for ODA projects may employ safety specialist who having qualification required in the contract or make their engineers be certified by international organizations such as NEBOSH and BCSP. The contractor's engineers can get such certificates by on-line training course.

Japan, USA and UK give special importance to the S&H work experience, Singapore and Indonesia do to training of 60 to 90 hrs course, and Thailand do to any of bachelor, training or experience.

Actually, depending on scale and accident risk of construction project, the employer or contractor seem to determine requirements of HSO for example the following may be applied for large or complicated projects, NEBOSH International National Diploma (Level 6) in UK and CSP (Certified Safety

(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management and whom the Contractor considers is qualified and able to perform the duties subject to receiving the consent of the Engineer.

(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years' work experience in construction of which minimum two (2) years shall be in health and safety management and whom the Contractor considers is qualified and able to perform the duties subject to receiving the consent of the Engineer.

1.12.3 Supporting Personnel

1.12.3 Supporting Personnel

<p>Professionals) by BCSP in USA, for small projects, International General Certificate (A level) in UK and SMS (Safety Management Specialists) in USA.</p> <p>NK: From the above, we propose to revise the (7) as above so that the qualification of HSO shall be 1) licensed or registered in the Country (legal requirement under the Laws of the Country), 2) specified in the Particular Safety Specification, and 3) International Diploma issued by NEBOSH in UK or Certified Safety Professionals by BCSP in USA or an equivalent alternative.</p> <p>(8) Unless otherwise specified in the Particular Safety Specification, the HSO shall also have minimum five (5) years work experience in construction of which minimum two (2) years shall be in health and safety management, two (2) years of which shall have been spent in health and safety work upon an international project (or projects) outside the Country; and whom the Contractor collectively with the academic, educational or vocational qualification described above, is qualified to perform the duties subject also to receiving the consent of the Engineer.</p> <p>NK: We consider NEBOSH Level 6 Diploma level is good idea., however there are few persons who meet the above requirements in ODA projects. Local and most Japanese contractors cannot find such person. Large contractors and European contractors may find them.</p> <p>We propose to add (7) "unless otherwise specified in Particular Safety Specification" before "the HSO..."</p> <p>I have split this clause for clarity.</p> <p>I suggest that NEBOSH is OK as it is because an equivalent alternative is acceptable (see use of this term in JSSS 1.4.2).</p> <p>It is also subject to receiving the consent of the Engineer.</p> <p>NK: We think "two (2) years experience outside the Country" is also too high requirement for the local contractors and also Japanese.</p> <p>We propose to delete "this two years outside the Country" and specify requirement in Particular Safety Specification depending on the Works.</p> <p>I suggest that it is better to state here as a basic standard. If JSSS cannot specify a general standard, the choice of Executing Agencies will vary greatly. I will draft a relevant clause for the User Guide but please note that I have reduced the experience requirements and deleted the international requirements.</p> <p>1.12.3 Supporting Staff</p> <p>NK-1: JICA commented and minutes recorded in January as follows:</p> <p>7.1.1 (5) HSO's duties:</p> <p>JC: The current sentence states that the HSO will check the temporary structure to certify it, and confirm when the TW will be removed and certify it also. I think that the role of HSO is to mainly confirm that the construction is being performed in accordance with the safety plan.</p> <p>No this is not a correct understanding, the HSO duties and obligations are far wider which is why this clause is correct and necessary.</p> <p>Wouldn't the present stipulation mean that the HSO would be very busy to killing his time only to check work procedure and not be able to see the whole thing?</p> <p>Yes, he will be very busy which is why he must be qualified and experience and given the full support staff that he requires and why he must receive the support of other Contractor's Personnel particularly Operation Leaders, all as stated herein.</p> <p>MM: HSO should always be ultimately responsible as the leader really of the Contractor's safety team with support duties delegated as necessary to a number of personnel including Operation Leaders. This is described in Chapter 1.10.1 and has been discussed. No change is required.</p>	<p>(1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.</p> <p>(2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.</p>	<p>(1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.</p> <p>(2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.</p>
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NK-2: JICA commented again in the meeting for Chap 8 Excavation works on 2020/2/20 as follows:

3. Common requirements in JSSS

(4) HSO は、安全に関する全責任を取るが、安全計画で規定の安全措置を現場の担当者が実行しているかを点検する責務を行うとの考えから、英文の "The HSO shall inspect work area before starting work..." は、 "The Contractor shall ..."へ変更する。

HSO has full responsibility for all safety and has a duty to check whether the person in charge of construction works execute measures at the Site specified in the Safety Plan.

From this idea, the HSO in the sentence "The HSO shall inspect work area before starting work..." shall be replaced with "the Contractor".

Please let me review the Excavation comments when I receive them, however this looks correct as he is responsible for inspecting the safety arrangements, even if another person does the inspection on his behalf. It needs no change but the word will not always be directly inspected by him, he can and will delegate but he is singularly responsible and will sign it on.

NK-3: JICA agreed in the meeting in January. However, they reconsidered this issue after the meeting and commented as above (4).

We consider HSO cannot actually carry out daily check of TW facilities, PPE, Contractor's Equipment, etc. before commencement of works. Such daily checks shall be made by the construction staff at the Site in accordance with the Safety Plan. HSO and his staff shall check the safety activities of the construction staff by reviewing check records and daily site inspection by the HSO and his staff.

Based on the above idea, we want to revise some sentences below.

- (1) The Contractor shall also appoint such further supporting personnel as the HSO may from time to time deem necessary or as may be instructed by the Engineer, to permit the HSO to perform his duties.
- (2) Such further supporting personnel may include Operation Leaders and/or other senior specialist and qualified Contractor's Personnel.

NK: We propose to delete (2) from the idea of mentioned above NK-3. The supporting personnel shall be full time assignment. The Contractor shall establish system of daily check by the site staff or designated personnel for check by the Contractor and reporting by the site manager to the HSO.

I think that (2) is clear, correct and necessary. Please refer to the following clauses also. It can be full time assistants or other Contractor's Personnel also who shall check certain aspects and who shall also have other responsibilities given to them by the HSO.

- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) The HSO shall be expected to develop internal procedures whereby all supporting personnel (JC21) shall be aware of the requirements for and the details of any inspection, for immediately advising the HSO of any unsafe conditions and of any recommendations to prohibit the start or to stop or change safety practices for the particular work and submittal requirements, ultimately allowing the

- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) The HSO shall prepare an internal procedure for the management of his supporting personnel, to ensure that:
 - (a) Supporting personnel are made aware of the requirements for any inspection and the details thereof;
 - (b) Supporting personnel immediately advise the HSO of any unsafe conditions with recommendations to prohibit the start or to stop or to change safety practices for the particular work; and
 - (c) Communications and submissions between HSO and supporting personnel are efficient, timely and clear.

Following implementation and compliance with the above procedure, the HSO shall sign all inspection records as if the inspection has been carried out by the HSO.

- (6) Where the Works or any part of the Works is to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified supporting personnel for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

1.12.4 Inspections

- (1) The HSO shall be responsible for ensuring:
 - (a) That all working areas are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;
 - (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to all affected persons and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and

- (3) Irrespective of any such appointment the HSO shall remain singularly responsible for the actions of such supporting personnel in terms of health and safety management.
- (4) Any reference in JSSS to the HSO performing inspections or the like for the health and safety aspects of any parts of the Works, shall be understood to include any inspections performed by any of these supporting personnel on behalf of the HSO and for which the HSO shall remain responsible.
- (5) The HSO shall prepare an internal procedure for the management of his supporting personnel, to ensure that:
 - (d) Supporting personnel are made aware of the requirements for any inspection and the details thereof;
 - (e) Supporting personnel immediately advise the HSO of any unsafe conditions with recommendations to prohibit the start or to stop or to change safety practices for the particular work; and
 - (f) Communications and submissions between HSO and supporting personnel are efficient, timely and clear.

Following implementation and compliance with the above procedure, the HSO shall sign all inspection records as if the inspection has been carried out by the HSO.

- (6) Where the Works or any part of the Works is to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified supporting personnel for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.

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 - (b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to all affected persons and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and

コメントの追加【伊藤23】: It is understood "internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO..."

But how "and the details of any inspection, for" relates to other part of this sentence???

Non-natives would have difficulty to understand.

<p>HSO to sign all inspection records as if the inspection has been carried out by the HSO.</p> <p>JC21: It is understood "internal procedures whereby all supporting personnel shall be aware of the requirements for immediately advising the HSO ... But how "and the details of any inspection, for" relates to other part of this sentence??" Non-notities would have difficulty to understand.</p> <p>NK5/6: YH think the sentence can be separated as follows though no so much difficult to understand the sentence. (次のように分解できるのだと思います。それほど違和感はありませんが。)</p> <p>1) the requirements for any inspection 2) the details of any inspection</p> <p>To MD, we would like to review the sentence because of sentence seems too long.</p> <p>(6) Where the Works or parts thereof are to be performed in shifts or in excess of normal working hours, or over an extensive working area or where major works are being undertaken simultaneously, or like circumstances, the Contractor shall appoint additional qualified support staff for the HSO all as necessary to ensure that the HSO is always able to perform his duties efficiently and effectively and so that health and safety management is not adversely affected.</p> <p>1.12.4 Inspections</p> <p>(1) The HSO shall be responsible for ensuring:</p> <p>(a) That all working areas of the Site (JC22) are inspected on a regular basis (at least once every working day or as otherwise required by JSSS) to detect if any unsafe practices, works or conditions exist and that all required safety measures are in place;</p> <p>JC22: The working areas are not always a part of the Site NK5/6: No comment to JC because JICA want to modify as they commented.</p> <p>(b) That if such unsafe practices, works or conditions are found to exist, then to immediately issue instructions to the relevant Contractor's Personnel and Employer's Personnel and immediately implement corrective measures in cooperation with such personnel or if this is not possible then to temporarily stop all construction activity on that part of the Works until such corrective action has been taken; and</p> <p>(c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE].</p> <p>(2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.</p> <p>1.13 HSO - Scope of Duties and Authority</p> <p>NK: JICA added "and Authorities" in the last comment. Now changed as above</p> <p>1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.</p> <p>1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:</p> <p>(1) Health and Safety Management Work:</p>	<p>(c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE].</p> <p>(2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.</p> <p>1.13 HSO - Scope of Duties and Authority</p> <p>1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.</p> <p>1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:</p> <p>(1) Health and Safety Management Work:</p> <p>(a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;</p> <p>(b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;</p> <p>(c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;</p> <p>(d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;</p> <p>(e) Temporarily stopping the Works or any part of the Works where the Engineer so instructs in accordance with JSSS 1.11 [Safety Compliance Instructions from the Engineer];</p> <p>(f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;</p> <p>(g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;</p> <p>(h) Appointment of further supporting personnel (refer to 1.12.3 [Supporting Staff]);</p> <p>(i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;</p>	<p>(c) That all inspection requirements of JSSS are complied with including the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE].</p> <p>(2) Any site inspections attended by the HSO, may also include the attendance of the Engineer at the option of the Engineer.</p> <p>1.13 HSO - Scope of Duties and Authority</p> <p>1.13.1 The HSO shall devote his full time and attention to maintaining health and safety upon the Works and protecting against accidents.</p> <p>1.13.2 The particular scope of duties and authority of the HSO shall cover (but shall not be limited to) the following:</p> <p>(1) Health and Safety Management Work:</p> <p>(a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;</p> <p>(b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;</p> <p>(c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;</p> <p>(d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;</p> <p>(e) Temporarily stopping the Works or any part of the Works where the Engineer so instructs in accordance with JSSS 1.11 [Safety Compliance Instructions from the Engineer];</p> <p>(f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;</p> <p>(g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;</p> <p>(h) Appointment of further supporting personnel (refer to 1.12.3 [Supporting Staff]);</p> <p>(i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;</p>
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コメントの追加【伊藤24】: The working areas are not always a part of the Site

<p>(a) Preparation and submission of Safety Plans, implementation, evaluation, improvement and revision thereof;</p> <p>(b) Preparation of monthly schedule of health and safety management activities, informing the Contractor's Personnel;</p> <p>(c) Regular (daily) inspections of the Works at the Site to ensure the Contractor's compliance with the Safety Plan, Instructions and other measures;</p> <p>(d) Temporarily stopping the Works or any part of the Works following any accident or where the HSO considers it unsafe to continue or where there is unsafe behaviour or practices of the Contractor's Personnel or any non-compliance with the Safety Plan Instructions and other measures;</p> <p>(e) Temporarily stopping the Works or any parts of the Works where the Engineer so instructs in accordance with JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>];</p> <p>(f) Investigating accidents, establishing cause, formulating and implementing preventive measures to avoid risk and prevent reoccurrence;</p> <p>(g) Preparing proposals, reporting and consulting with the Engineer, especially when an accident occurs or any risk or hazardous situation is likely;</p> <p>(h) Appointment of further supporting personnel (refer to 1.12.3 [<i>Supporting Staff</i>]);</p> <p>(i) Instructing and training Operation Leaders in the health and safety aspects of their work including requirements for inspection and confirmation of results to HSO;</p> <p>NK: As proposed to 1.12.3, we propose that the supporting personnel does not include the construction staff. We propose the following to replace(i) above:</p> <p><i>(i) Instructing and training the person in charge of construction works and the Contractor's Equipment in the health and safety aspects of their work including requirements for inspection and reporting of results to HSO;</i></p> <p><i>disagree and do not feel that any change is necessary. The position and authority of the HSO for the health safety on the Works should not be compromised. Who he requires assistance from is really his choice and it is dependent upon many factors such as the contractor's organisation, who is available, the general experience, capability and skill level of workers. We or the Engineer should have no interest in who he delegates support to providing the HSO does his job properly.</i></p> <p>(j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;</p> <p>(k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;</p> <p>(l) Planning and implementation of various training and education implementation plans;</p>	<p>(j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;</p> <p>(k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;</p> <p>(l) Planning and implementation of various training and education implementation plans;</p> <p>(m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;</p> <p>(n) Preparing regular internal and external reports on health and safety activities; and</p> <p>(o) Hazard prediction activity.</p> <p>1.14 Procedure for Resuming the Works</p> <p>1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [<i>HSO - Scope of Duties and Authority</i>] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:</p> <p>(1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.</p> <p>(2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.</p> <p>(3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.</p> <p>(4) If the Engineer gives no such notice of non-compliance for the original proposal within seven (7) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving three (3) days' notice in writing of the resumption date.</p> <p>To be proactive, the Engineer may give consent at any stage within the above stated time scales.</p> <p>(5) The Contractor resumes the Works or part of the Works on the due date.</p>	<p>(j) Instructing the Contractor's Personnel to take improvement measures for maintaining health and safety and preventing accidents;</p> <p>(k) Assisting with the selection and assignment of workers and other Contractor's Personnel, including ascertaining the physical and mental health, age and capability in consideration of the nature of work to be carried out;</p> <p>(l) Planning and implementation of various training and education implementation plans;</p> <p>(m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;</p> <p>(n) Preparing regular internal and external reports on health and safety activities; and</p> <p>(o) Hazard prediction activity.</p> <p>1.14 Procedure for Resuming the Works</p> <p>1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [<i>Safety Compliance Instructions from the Engineer</i>] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [<i>HSO - Scope of Duties and Authority</i>] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:</p> <p>(1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.</p> <p>(2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.</p> <p>(3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.</p> <p>(4) If the Engineer gives no such notice of non-compliance for the original proposal within seven (7) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving three (3) days' notice in writing of the resumption date.</p> <p>To be proactive, the Engineer may give consent at any stage within the above stated time scales.</p>
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<p>(m) Creating and implementing procedures for monitoring and maintaining accident and safety statistics, including fatalities, lost time records and near-miss cases;</p> <p>(n) Preparing regular internal and external reports on health and safety activities; and</p> <p>(o) Hazard prediction activity.</p> <p>1.14 Procedure for Resuming the Works</p> <p>1.14.1 If the Engineer has issued an instruction under JSSS 1.11 [Safety Compliance Instructions from the Engineer] or if the HSO has temporarily stopped the Works or any part of the Works in accordance with JSSS 1.13 [HSO - Scope of Duties and Authority] then, unless otherwise instructed by the Engineer, the procedure for resuming the Works or any part of the Works, shall be as follows:</p> <p>(1) The Contractor (represented by the HSO) shall investigate and establish the cause, formulate preventive measures to ensure that the risk is avoided and accident cannot occur/reoccur.</p> <p>(2) The Contractor (represented by the HSO), shall prepare and submit his proposal describing the investigation, cause and preventive measures to the Engineer.</p> <p>(3) The Engineer may review the Contractor's proposal and may give notice of non-compliance to the Contractor stating the extent to which the proposal does not comply with the Contract. Within seven (7) days after receiving any such notice the Contractor shall rectify such non-compliance and resubmit to the Engineer.</p> <p>(4) If the Engineer gives no such notice of non-compliance for the original proposal within seven fourteen (14/7) (JC23) days of the date of receipt or for the resubmitted proposal within seven (7) days of receipt, the Contractor shall resume the Works or part thereof in accordance with the proposal subject to complying with his other obligations under the Contract, by giving seven-three (73) (JC24) days' notice in writing of the resumption date.</p> <p>To be proactive, the Engineer may give consent at any stage within the above stated time scales.</p> <p>JC23& 24: 14 days are too long, and 7 days are too long. NK5/6: Will modify as commented.</p> <p>(5) The Contractor resumes the Works or part of the Works on the due date.</p> <p>(6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.</p> <p>(7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.</p> <p>1.15 Contractor's Safety Management Activities</p> <p>1.15.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.</p> <p>1.15.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):</p> <p>NK: We think the 1.15 is same as Japanese draft, however, we feel it is not clear who take the following action.</p>	<p>(6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.</p> <p>(7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.</p> <p>1.15 Contractor's Safety Management Activities</p> <p>1.15.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.</p> <p>1.15.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):</p> <p>(1) Overall Safety Management Activities:</p> <p>(a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM);</p> <p>(b) Attending pre-work meetings, pre-start meetings, schedule meetings; and</p> <p>(c) Monitoring the implementation of the Safety Plan.</p> <p>(2) Daily Safety Management of Contractor's Personnel:</p> <p>(a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM;</p> <p>(b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures;</p> <p>(c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: 5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;</p>	<p>(5) The Contractor resumes the Works or part of the Works on the due date.</p> <p>(6) The Contractor verifies the effectiveness of the preventive measures and informs the Engineer.</p> <p>(7) The Contractor carries out a risk assessment and revises the Safety Plan and Method Statements as necessary.</p> <p>1.15 Contractor's Safety Management Activities</p> <p>1.15.1 The Contractor shall faithfully implement the Safety Plan performing all necessary management activities to ensure total compliance.</p> <p>1.15.2 In addition to the tasks of the HSO described above, the Contractor's health and safety management activities shall include (but are not limited to):</p> <p>(1) Overall Safety Management Activities:</p> <p>(a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM);</p> <p>(b) Attending pre-work meetings, pre-start meetings, schedule meetings; and</p> <p>(c) Monitoring the implementation of the Safety Plan.</p> <p>(2) Daily Safety Management of Contractor's Personnel:</p> <p>(a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM;</p> <p>(b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures;</p> <p>(c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: 5S ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;</p>
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コメントの追加 [岡本25]: 14 days are too long.

コメントの追加 [伊藤26]: 7 days are too long.

<p><i>Is there any good idea to express the H&S management shall be made by management personnel consisting of construction managers, Operation Leaders, HSO (for reference I added personnel in charge of the activities below).</i></p> <p><i>Please see above notes. I do not feel that the following is desirable or necessary.</i></p> <p><i>For further understanding, the Contractor's Representative has similar in fact heavier responsibilities but we (nor FIDIC) consider defining which of his staff do what to support him. I do not recommend but we try to do.</i></p> <p>Overall Safety Management Activities:</p> <ul style="list-style-type: none"> (a) Arranging, chairing, attending meetings as described above and other internal Contractor meetings including Toolbox Meetings (TBM); by construction managers, Operation Leaders, HSO; (b) Attending pre-work meetings, pre-start meetings, schedule meetings; and by construction managers, HSO; (c) Monitoring the implementation of the Safety Plan. by HSO; <p>Above is not recommended.</p> <p>(1) Daily Safety Management of Contractor's Personnel:</p> <p>NK: We would like to add "Daily" before Safety in (2) to distinguish from (1).</p> <p>No problem added already.</p> <ul style="list-style-type: none"> (a) Instruction and management on health and safety at general morning meetings, pre-work meetings, TBM; by construction managers, HSO; (b) Providing specific advice and instructions to all Contractor's Personnel on their assigned work tasks in advance of starting so that all workers are aware of the requirements of the Method Statements and Safety Plan including work place, scope, methods, safety PPE, timing and safety procedures; by construction managers, Operation Leaders; (c) Instruction and management of traditional Japanese cleanliness safety campaigns known in Japan as: ; by construction managers, Operation Leaders; <p>SS ACTIVITIES where: Seiri = sorting, Seiton = tidying, Seiso = cleaning, Seiketu = cleanliness and Shituke = discipline;</p> <ul style="list-style-type: none"> (d) Instruction and management of safety education and training; by construction managers, HSO; (e) Instruction and management of all safety measures; and by construction managers, Operation Leaders, HSO; (f) Site Safety Inspections—by construction managers, Operation Leaders, HSO; <p>None of above is recommended.</p> <p>NK: We withdraw the addition. NK: in (f), Joint will be deleted as Joint Site Safety Inspections is made by the HSO and the Engineer.</p> <p>No problem deleted already.</p> <p>1.16 Joint Site Safety Inspections</p>	<ul style="list-style-type: none"> (d) Instruction and management of safety education and training; (e) Instruction and management of all safety measures; and (f) Site Safety Inspections. <p>1.16 Joint Site Safety Inspections</p> <p>1.16.1 In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.</p> <p>1.16.2 Frequency of Joint Site Safety Inspections shall be at least once a week.</p> <p>1.16.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.</p> <p>1.16.4 The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.</p> <p>1.16.5 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.</p> <p>1.17 Compliance Monitoring and Auditing</p> <p>1.17.1 The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured. Such compliance shall be monitored efficiently and transparently at all times, for which purpose the Contractor shall:</p> <ul style="list-style-type: none"> (1) Create checklists for monitoring. (2) Carry out regular and random inspections. (3) Monitor failed, unsafe or non-compliant conditions and analyse data to determine what measures are most effective in ensuring safety and minimising accidents. (4) Create storage and filing systems for the monitoring records. (5) Copy safety information to the Engineer as may be necessary for the Engineer's file if so requested by the Engineer. <p>1.17.2 Safety inspections are intended to search for risks and hazards, which present a threat to safe working.</p> <p>1.17.3 The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management</p>	<ul style="list-style-type: none"> (d) Instruction and management of safety education and training; (e) Instruction and management of all safety measures; and (f) Site Safety Inspections. <p>1.16 Joint Site Safety Inspections</p> <p>1.16.1 In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. 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<p>1.16.1 In addition to the HSO's own daily Site Safety Inspections, the HSO shall conduct regular Joint Site Safety Inspections with the Engineer. Respective safety staff may also attend.</p> <p>1.16.2 Frequency of Joint Site Safety Inspections shall be at least once a week.</p> <p>1.16.3 Where any safety risks are detected during the inspections, the Contractor shall take immediate action.</p> <p>1.16.4 The Engineer may be invited or may choose to participate in the Contractor's daily site safety inspections which will then be deemed to be a Joint Site Safety Inspection.</p> <p>1.16.5 The Contractor shall prepare a report of each Joint Site Safety Inspection and submit this to the Engineer within seven (7) days after the inspection. A further copy shall be included in the Contractor's monthly progress report.</p> <p>1.17 Compliance Monitoring and Auditing</p> <p>1.17.1 The HSO shall develop and implement systems to ensure that compliance with the Safety Plan is ensured. Such compliance shall be monitored efficiently and transparently at all times, for which purpose the Contractor shall:</p> <p>NK: We propose to divide the above to two sentences because the above sentence is long and contains two subjects.</p> <p>1.17.2 Safety inspection are intended to search for risks and hazards, which present a threat to safe working.</p> <p>1.17.3 The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:</p> <ol style="list-style-type: none"> (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements? (2) Are the Safety Plan requirements being met? (3) Is there documented proof of compliance? (4) Is health and safety training effective? (5) Is the Contractor's health and safety management system working effectively? <p>1.17.4 The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.</p>	<p>systems are working by focussing basically on the following five questions:</p> <ol style="list-style-type: none"> (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements? (2) Are the Safety Plan requirements being met? (3) Is there documented proof of compliance? (4) Is health and safety training effective? (5) Is the Contractor's health and safety management system working effectively? <p>1.17.4 The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.</p> <p>1.17.5 The audit procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer.</p> <p>1.17.6 The audit shall be headed by a senior member of the Contractor's head office health and safety team.</p> <p>1.17.7 If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.</p> <p>1.17.8 The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.</p> <p>1.17.9 The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.</p> <p>1.17.10 The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems. The Audits shall not replace the regular health and safety inspections.</p> <p>1.17.11 The audits shall be conducted at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.</p>	<p>1.17.3 The Contractor shall also carry out regular health and safety audits, to ascertain if the Contractor's Safety Plan and health and safety management systems are working by focussing basically on the following five questions:</p> <ol style="list-style-type: none"> (1) Does the Safety Plan cover all regulatory and construction industry best practice requirements? (2) Are the Safety Plan requirements being met? (3) Is there documented proof of compliance? (4) Is health and safety training effective? (5) Is the Contractor's health and safety management system working effectively? <p>1.17.4 The persons or team designated to conduct the audits should take a fact-finding approach to gather data and members shall be familiar with the Safety Plan and the nature of the Works.</p> <p>1.17.5 The audit procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer.</p> <p>1.17.6 The audit shall be headed by a senior member of the Contractor's head office health and safety team.</p> <p>1.17.7 If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.</p> <p>1.17.8 The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.</p> <p>1.17.9 The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.</p> <p>1.17.10 The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems. The Audits shall not replace the regular health and safety inspections.</p> <p>1.17.11 The audits shall be conducted at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.</p>
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<p>1.17.5 The audit team-procedures shall be prepared by a senior member of the Contractor's head office health and safety team and shall require the consent of the Engineer.</p> <p>1.17.51.17.6 Unless otherwise consented to by the Engineer, the audit shall be headed by a senior member of the Contractor's head office health and safety team.</p> <p>1.17.61.17.7 If so agreed by the Engineer, audits may be outsourced by the Contractor to a health and safety company subject to obtaining the consent of the Engineer.</p> <p>1.17.71.17.8 The HSO may attend audits but only in an advisory capacity and team members shall not be required or allowed to audit their own work.</p> <p>1.17.81.17.9 The Contractor shall invite the Engineer to attend in the capacity of a witness ensuring that the audit is being carried out effectively and with a balanced, fair and non-biased approach.</p> <p>1.17.91.17.10 The health and safety audits are primarily to check the effectiveness of the Safety Plan, the Contractor's health and safety personnel and the Contractor's health and safety management systems.</p> <p>The Audits shall not replace the regular health and safety inspections.</p> <p>NK: We think the above sentence is better to be divided two sentences.</p> <p>This is not quite correct but I have divided anyway.</p> <p>1.17.101.17.11 The audits shall be conducted on a random basis at least twice every year and without giving notice to the Contractor's Personnel or others when any audit is to take place.</p> <p>1.17.111.17.12 The Engineer may at his option instigate a random health and safety audit by giving 72 hours' written notice to the Contractor. (JC25)</p> <p>NK: JICA deleted in the last comment. We also consider the Engineer does not do auditing but inspection/supervise the Contractor's activities, and agree to delete this.</p> <p>do not really understand why it is deleted, as in any case the Engineer should be able to request/initiate an audit if he feels that the H and S system is not working properly.</p> <p>NK: NK misunderstood this clause as the Engineer to do audit. We recommend now as follows:(time limit is given considering the preparation and trip time of the auditing team, and the safety management state cannot be improved in short time except such as cleaning the site, etc. If the Contractor takes actions for the auditing in short time, there is a merit for the Contractor to show example of required improvement.</p> <p>The Engineer may at his option instruct the Contractor to execute a health and safety audit by giving proper preparation time for the auditing team between 3 days and 7 days.</p> <p>JC25: It is not practical that the auditing team of the headquarters visit the Site within 3 to 7 days after the Engineer's instruction.</p> <p>NK: 1.17.11(1.17.12) will be deleted.</p> <p>1.17.121.17.13 Prearranged audits are not recommended as this will tend to artificially improve the application of safety measures by respective personnel as the time approaches, to avoid criticism.</p> <p>NK: JICA commented "Such "not to do" should not be included in the specification." and deleted this sentence in the last comment. We agree to delete this because the auditing team cannot come to the site from Headquarters located in other countries by short notice, and the ISO auditing is made by around one month notice or as scheduled.</p>	<p>1.17.12 An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.</p> <p>1.17.13 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.</p> <p>1.18 Proper Placement of Contractor's Personnel</p> <p>1.18.1 To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.</p> <p>1.18.2 In compliance with GC 6.9 [Contractor's Personnel], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.</p> <p>1.18.3 Workers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.</p> <p>1.18.4 The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.</p> <p>1.18.5 The HSO shall countersign all records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.</p>	<p>1.17.12 An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.</p> <p>1.17.13 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. 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Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE, tools, equipment and safety equipment.</p> <p>1.18.3 Workers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.</p> <p>1.18.4 The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.</p> <p>1.18.5 The HSO shall countersign all records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their</p>
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<p>1.17.13, 1.17.14 1.17.13, 1.17.14 An audit report shall be prepared by the leader of the audit team, detailing the findings of the team and submitted to the Engineer within seven (7) days after the audit. The report shall be signed by all attendees of the Contractor to certify their agreement to the content and to any recommendations for improvement.</p> <p>1.17.14, 1.17.15 1.17.14, 1.17.15 The HSO shall analyse the findings of the audit, revise the Safety Plan and change health and safety management practices as necessary to ensure the required improvement. The Engineer shall be fully informed of all such revisions and changes.</p> <p>1.18 Proper Placement of Contractor's Personnel</p> <p>1.18.1 To a varying extent, many types of construction works are inherently dangerous and accordingly the Contractor under his duty of care must ensure that risks arising from all such potential dangers are avoided and Contractor's Personnel consequently protected.</p> <p>1.18.2 In compliance with GC 6.9 [<i>Contractor's Personnel</i>], the Contractor shall assign only those personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. Contractor's Personnel shall also be suitable and capable of performing the work tasks for which they are selected in consideration of their physical fitness, mental condition, age and capability, all shall be equipped with correct PPE tools, equipment and safety equipment.</p> <p>1.18.3 1.18.3 LabourerWorkers and unskilled workers shall never be assigned to any work on Site on their own, all shall be assigned in groups and each work group must always include an Operation Leader to ensure compliance with the Contractor's safety regulations.</p> <p>1.18.4 The correct grades and numbers of Contractor's Personnel shall be assigned to respective work tasks and reasonable times and durations and support facilities shall be afforded by the Contractor to promote the safe and effective discharge of duties.</p> <p>1.18.5 1.18.5 The Contractor shall specifically ascertain that Contractor's Personnel are all appropriately qualified, skilled and experienced in their respective trades or occupations and the Contractor shall keep records of compliance with this requirement. (JC26)</p> <p>1.18.6 1.18.6 The HSO shall countersign all such records to certify his confirmation that each member of the Contractor's Personnel is appropriately qualified, skilled and experienced in their respective trades or occupations prior to their placement. These records shall be made available for inspection by the Engineer.</p> <p>1.18.7 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:</p> <ol style="list-style-type: none"> (1) Work content and work environment. (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability. 	<p>1.18.6 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:</p> <ol style="list-style-type: none"> (1) Work content and work environment. (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability. (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts. (4) Allocation of an achievable and safe work volume and time. (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [<i>Child Labour</i>]. <p>1.18.7 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.</p> <p>1.18.8 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.</p> <p>1.18.9 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that the HSO resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.</p> <p>1.19 Safety Training Generally</p> <p>1.19.1 The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.</p> <p>1.19.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.</p> <p>1.19.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages</p>	<p>placement. These records shall be made available for inspection by the Engineer.</p> <p>1.18.6 Suitability of Contractor's Personnel and their work assignment shall be assessed by the Contractor with the assistance of the HSO in consideration of:</p> <ol style="list-style-type: none"> (1) Work content and work environment. (2) Educational or vocational qualifications, practical experience, skill training and eligibility for category, title, rank or position by virtue of their achieved and demonstrated capability. (3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts. (4) Allocation of an achievable and safe work volume and time. (5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [<i>Child Labour</i>]. <p>1.18.7 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.</p> <p>1.18.8 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.</p> <p>1.18.9 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that the HSO resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.</p> <p>1.19 Safety Training Generally</p> <p>1.19.1 The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.</p> <p>1.19.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.</p>
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コメントの追加 [岡本27]: Duplication with 1.18.2. Also, difficult to have a concrete image on what kind of records???

<p>(3) Physical and mental health condition upon commencement of employment and on a regular basis before daily work starts.</p> <p>(4) Allocation of an achievable and safe work volume and time.</p> <p>(5) Allocation of suitable work to older workers and also to workers under 18 in compliance with GC 6.21 [<i>Child Labour</i>].</p> <p>1.18.8 If the Laws of the Country require operating, supervising or management staff or any other Contractor's Personnel to have a licence, particular academic, educational or vocational qualification, diploma, registration or certification for any of their services or operations at Site, the Contractor shall ascertain that all such Contractor's Personnel possess such documents.</p> <p>1.18.9 The Contractor shall ascertain the authenticity and validity of licenses and all other documentation for Contractor's Personnel and if necessary shall independently test all personnel to ascertain that they do possess sufficient knowledge, academic, educational or vocational qualification, experience and skills.</p> <p>1.18.10 The Contractor shall implement an identification (ID) pass system whereby all Contractor's Personnel carry ID passes with name, photograph, blood type, official ID number and statement of the skill and position for which the worker is qualified and assigned. This shall be clearly displayed by the person and be available for inspection and validation by the Engineer at all times. If any of the Contractor's Personnel is found not to have such valid ID for the position upon which he is assigned, the Engineer will instruct that person directly to stop work immediately, contact the HSO immediately and instruct that the HSO resolves the situation without delay by immediately removing the offending person from the particular work being undertaken and from the Site and assigning a suitable replacement, unless otherwise instructed by the Engineer.</p> <p>NK: We think it is better to replace "he" with "the HSO" though he/she is nowadays used. <i>If it is not necessary, please refer to JSSS 1.2.2 (8) and GC 1.2 (i). I have used "He" and "his" for example consistently and if it changes here it will require further change.</i></p> <p>1.19 Safety Training Generally</p> <p>1.19.1 The Contractor shall conduct health and safety education and training for all the Contractor's Personnel.</p> <p>1.19.2 The Contractor shall describe in the Safety Plan the outline of the health and safety training plans describing participants, time, teaching materials, policy for selecting trainers, etc. In addition, the Contractor shall submit full details of all health and safety training to the Engineer for information before the start of any training.</p> <p>1.19.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.</p> <p>1.19.3.1.19.4 Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate). (JC27)</p> <p>IC27: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.</p> <p>NK5/6: Will modify as commented.</p>	<p>during training and the Contractor shall bear all necessary associated costs and expenses.</p> <p>1.19.4 Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate).</p> <p>1.19.5 Training Personnel</p> <p>(1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.</p> <p>(2) All trainers shall be fluent in the language of the persons to be trained.</p> <p>(3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.</p> <p>1.19.6 Records of education and training</p> <p>The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.</p> <p>1.20 Safety Induction Training</p> <p>1.20.1 Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom he is responsible, including the Employer's Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.</p> <p>1.20.2 The following subjects shall be covered:</p> <p>(1) Responsible persons, chain of command and means of communication.</p> <p>(2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.</p> <p>(3) Working procedures generally.</p> <p>(4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.</p> <p>(5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [<i>Dangerous Work</i>] for additional training requirements.</p>	<p>1.19.3 Training shall be provided free-of-charge to all participants and conducted during normal working hours, all trainees shall be paid their normal wages during training and the Contractor shall bear all necessary associated costs and expenses.</p> <p>1.19.4 Training shall be provided in a language which the persons to be trained fully understand (i.e. the language of the persons to be trained or the language for communications as defined in GC 1.4 as appropriate).</p> <p>1.19.5 Training Personnel</p> <p>(1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.</p> <p>(2) All trainers shall be fluent in the language of the persons to be trained.</p> <p>(3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.</p> <p>1.19.6 Records of education and training</p> <p>The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.</p> <p>1.20 Safety Induction Training</p> <p>1.20.1 Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom he is responsible, including the Employer's Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.</p> <p>1.20.2 The following subjects shall be covered:</p> <p>(1) Responsible persons, chain of command and means of communication.</p> <p>(2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care.</p> <p>(3) Working procedures generally.</p> <p>(4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment.</p> <p>(5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [<i>Dangerous Work</i>] for additional training requirements.</p>
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コメントの追加 [SS83]: It seems 1.19.4 covers (2), so (2) may be deleted.

コメントの追加 [MJD84R83]: It is not the same, this is the fluency of the trainer 1.19.4 is the language of training

コメントの追加 [J28]: Very often, foreign people (Filipinos or Singaporeans, for example) are mobilised as manager class personnel in many construction sites. And those people must be trained (e.g. induction training) in English.

<p>1.20 Safety Induction Training</p> <p>1.20.1 Safety induction training shall be provided by the Contractor for all Contractor's Personnel, any subcontractors, suppliers and others for whom he the HSO is responsible, including the Employer's Personnel and all other persons who are entitled to be on the Site at the request of the Employer or Engineer.</p> <p>Ditto above</p> <p>1.20.2 The following subjects shall be covered:</p> <ol style="list-style-type: none"> (1) Responsible persons, chain of command and means of communication. (2) Use of Contractor's Equipment, small tools and tackle, machinery, Temporary Works, Goods, materials; potential danger and required care. (3) Working procedures generally. (4) Inspections before starting and during execution of any work, reporting unsafe working conditions and equipment. (5) Dangerous Works; General rules, locations, posting warning signs, precautions and general working requirements. Refer to JSSS 1.22 [Dangerous Work] for additional training requirements. (Refer to separate requirements for special training). <p>NK: May we know where we can find to refer to special training?</p> <p>Experiences</p> <ol style="list-style-type: none"> (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment. (7) Maintaining all working areas in an orderly, tidy and clean condition at all times. (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting. (9) Firefighting; actions, precautions and control. (10) Health and safety rules. 	<ol style="list-style-type: none"> (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment. (7) Maintaining all working areas in an orderly, tidy and clean condition at all times. (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting. (9) Firefighting; actions, precautions and control. (10) Health and safety rules. (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned. (12) Emergency Response Plan; evacuation and calling list. (13) Other related health and safety matters. <p>1.20.3 Practical on-Site demonstrations shall be included.</p> <p>1.21 Skill Training</p> <p>1.21.1 The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations.</p> <p>1.21.2 The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience.</p>	<ol style="list-style-type: none"> (6) PPE and other safety devices; use, handling and care, reporting worn, damaged or defective equipment. (7) Maintaining all working areas in an orderly, tidy and clean condition at all times. (8) Accidents; action, evacuation and treatment, basic first-response medical aid, reporting. (9) Firefighting; actions, precautions and control. (10) Health and safety rules. (11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned. (12) Emergency Response Plan; evacuation and calling list. (13) Other related health and safety matters. <p>1.20.3 Practical on-Site demonstrations shall be included.</p> <p>1.21 Skill Training</p> <p>1.21.1 The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations.</p> <p>1.21.2 The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local</p>
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<p>(11) Causes and prevention of diseases and conditions which may be injurious to health that may occur in relation to the work concerned.</p> <p>(12) Emergency Response Plan; evacuation and calling list.</p> <p>(13) Other related health and safety matters.</p> <p>1.20.3 Practical on-Site demonstrations shall be included.</p> <p>1.20.4 Training Personnel (JC28)</p> <p>JC28: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).</p> <p>NK5/6: NK agreed to the above.</p> <p>(1) Trainers (which description shall include teachers and educators also) can be personnel employed by the Contractor or external trainers for whom the Contractor shall remain responsible, all experienced, academically, educationally or vocationally qualified and (if required by the Laws of the Country), formally registered as trainers, teachers and educators.</p> <p>(2) All trainers shall be fluent in the language of the persons to be trained.</p> <p>(3) In case of absence of availability of suitable personnel in the Country, the Contractor shall mobilise personnel from other countries whom the Contractor considers possess the necessary academic, educational or vocational qualification, ability and experience, subject to receiving the advance consent of the Engineer. In such case, proficient translators, familiar with construction safety terms shall be provided by the Contractor where necessary.</p> <p>1.20.5 Records of education and training</p> <p>The Contractor shall create and maintain records of all trainees, showing full details of training subjects and their capability, achievements etc., and all shall be made available for the inspection of the Engineer.</p>	<p>However, if the qualified, skilled and experienced Contractor's Personnel required by the Contract is not available in the Country or not available in the numbers or of the standards of for the periods required, the Contractor shall:</p> <p>(1) Source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, and/or</p> <p>(2) Recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.</p> <p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion and Defect Notification Period.</p>	<p>human resources with appropriate qualifications and experience. However, if the qualified, skilled and experienced Contractor's Personnel required by the Contract is <u>not available</u> in the Country or not available in the numbers or of the standards of for the periods required, the Contractor shall:</p> <p>(1) Source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries, and/or</p> <p>(2) Recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.</p> <p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion and Defect Notification Period.</p>
<p>1.21 Skill Training</p> <p>1.21.1 The Contractor is reminded of his obligations under GC 6.9 [Contractor's Personnel] which require that all Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractor has been appointed under the Contract on this fundamental understanding and it is not therefore incumbent upon the Employer to support basic skill training of the Contractor's Personnel engaged upon the Works in terms of time and cost. (JC29)</p> <p>JC29: Not needed to say so in the specification.</p> <p>NK: Will delete as commented.</p> <p>1.21.2 The Contractor is also reminded of his obligations under GC 6.1 [Engagement of Staff and Labour] according to which the Contractor is encouraged, to the extent practicable and reasonable, to mobilize the local human resources with appropriate qualifications and experience. However, if The Contractor shall be deemed to be aware that in many countries and locations for which ODA is provided, the qualified, skilled and experienced Contractor's Personnel required by the Contract is frequently not available in the Country or not available in the numbers or of the standards of for the periods required. This is particularly the case in view of the international level of quality, health and safety practice, and performance that is demanded for these ODA Projects. the Contractor shall:</p>	<p>(1) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with</p>	<p>(1) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing</p>

コメントの追加 [伊藤29]: We believe that 1.20.4 and 1.20.5 should be transferred to 1.19 since the contents are relevant to all the training (not only to the induction training).

コメントの追加 [岡本30]: Not needed to say so in the specification.

<p>(1) source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries; and/or</p> <p>(2) recruit candidates in the Country and train them to provide the skill required to properly perform their assignments.</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall be expected to source and assign upon the Works Contractor's Personnel (of at least Operation Leader and skilled worker status) from other countries. (JC30) all of whom shall be appropriately qualified, skilled and experienced to the standards required, sufficiently to meet the Contractor's obligations for performance, quality, health and safety under the Contract.</p> <p>JC30: May be the case in many projects, but skilled staff may be sometimes locally mobilized.</p> <p>NK5/6: Will modify as commented.</p> <p>This shall be in such numbers and for such periods as are necessary to maintain the required standards of performance, quality, health and safety throughout the Time for Completion and Defect Notification Period. (JC31)</p> <p>JC31: The Contractor also has to work during DNP and need skilled staff.</p> <p>NK5/6: Will modify as commented.</p> <p>Unless otherwise specified in the Particular Safety Specification and without limiting the Contractor's obligations as above, the Contractor shall be required to employ selected candidates as potential operation leaders, with whom the Contractor shall implement a policy of mutual cooperation and training and ensure that this is adopted by all other Contractor's Personnel all of whom shall work closely with and transfer necessary knowledge and skills via OJT to such candidates to raise skill levels and awareness of international standards and for which the following shall apply: (JC32)</p> <p>JC32: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences? I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.</p> <p>NK5/6: To MD, please review the comment and modify the sentences.</p> <p>(1) To compliment this OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to provide basic skill training to develop the ability of local counterpart trainee operation leaders in the necessary skills for the Works and who in future, will pass on their knowledge to their working colleagues and compatriots.</p> <p>(2) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his consent.</p> <p>NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.</p> <p>Consent is better which is why I have used it. There will be a great tendency for the Contractor not to comply with these requirements properly and it needs to be enforceable somehow, otherwise safety (and quality and performance) will suffer.</p> <p>"For information" really has no meaning.</p> <p>Only "for information", Contractor can proceed even if the course syllabus and hours are clearly inadequate and would not otherwise be acceptable.</p> <p>The Contractor shall test and qualify such personnel and provide them</p>	<p>copies provided to the Engineer if so requested by the Engineer.</p> <p>(2) Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.</p> <p>(3) Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC-6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his information.</p>	<p>and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.</p> <p>(2) Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.</p> <p>(3) Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC-6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer for his information.</p>
<p>1.21.3 Further Training of Operation Leaders and Skilled Workers</p> <p>(1) Unless otherwise specified in the Particular Safety Specification and without limiting or changing the Contractor's obligations under the Contract, the Contractor shall be required to select candidates from his local skilled and unskilled workforce that he considers are suitable to act as future Operation Leaders and skilled workers, respectively.</p> <p>(2) Training of Operation Leaders</p> <p>(a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their management abilities, skill levels and awareness of international safety and quality standards.</p> <p>(b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability, skills and awareness and also to pass on their knowledge in future to their working colleagues and compatriots.</p> <p>(3) Training of Skilled Workers</p> <p>(a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their skill levels and awareness of international safety and quality standards.</p> <p>(b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability, skills and awareness according to the work and also to pass on their knowledge in</p>	<p>1.21.3 Further Training of Operation Leaders and Skilled Workers</p> <p>(1) Unless otherwise specified in the Particular Safety Specification and without limiting or changing the Contractor's obligations under the Contract, the Contractor shall be required to select candidates from his local skilled and unskilled workforce that he considers are suitable to act as future Operation Leaders and skilled workers, respectively.</p> <p>(2) Training of Operation Leaders</p> <p>(a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their management abilities, skill levels and awareness of international safety and quality standards.</p> <p>(b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability, skills and awareness and also to pass on their knowledge in future to their working colleagues and compatriots.</p> <p>(3) Training of Skilled Workers</p> <p>(a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their skill levels and awareness of international safety and quality standards.</p> <p>(b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability, skills and awareness according to the work and also to pass on their knowledge in</p>	<p>1.21.3 Further Training of Operation Leaders and Skilled Workers</p> <p>(1) Unless otherwise specified in the Particular Safety Specification and without limiting or changing the Contractor's obligations under the Contract, the Contractor shall be required to select candidates from his local skilled and unskilled workforce that he considers are suitable to act as future Operation Leaders and skilled workers, respectively.</p> <p>(2) Training of Operation Leaders</p> <p>(a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their management abilities, skill levels and awareness of international safety and quality standards.</p> <p>(b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability, skills and awareness and also to pass on their knowledge in future to their working colleagues and compatriots.</p> <p>(3) Training of Skilled Workers</p> <p>(a) The Contractor shall ensure that his personnel work closely with and transfer necessary knowledge and skills via OJT to such candidates to develop their skill levels and awareness of international safety and quality standards.</p> <p>(b) To compliment the OJT, the Contractor shall provide classroom-based training courses and assign qualified instructors to develop the ability, skills and awareness according to the work and also to pass on their knowledge in</p>

コメントの追加【伊藤31】: May be the case in many project, but skilled staff may be sometimes locally mobilized.

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コメントの追加【伊藤33】: This sentence is too complicated to be understood by a non-native like me. Could you rephrase with a set of shorter and concise sentences? I somehow understand that this mentions the training for operation leaders. On the other hand, nothing is mentioned about skill training those other than operation leaders. We believe the latter should be added in the text.

with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

Details-Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.

NK: This request is specified in Annex 1.2 (24)(26) as Outline shall be submitted in Bid Stage SP.

This has been repeatedly discussed and explained.

If safety is to improve, this must happen from Bid stage onwards.

Every part of the Bid SP is Outline but some information is necessary on each subject listed in the Annex and should be submitted at Bid stage. If it is inadequate, only then can it be clarified and negotiated before the Contract is signed. After signing is often too late.

NK: We agree to MD's opinion. However, the above sentence needs to be modified to such as "Updated details of such training mentioned in the Bid Stage Safety Plan shall be submitted."

⊕ ~~Subject to receiving the consent of the Engineer, the Contractor may demobilise his Contractor's Personnel from other countries on the understanding that he is satisfied that candidates that have been successfully qualified and that they are able to act fully in accordance with the requirements of the Contract.~~

⊕ ~~When the Contractor is satisfied that candidates have been successfully trained and qualified, and that they are able to act fully in accordance with the requirements of the Contract and subject to receiving the consent of the Engineer, the Contractor may demobilise his Contractor's Personnel from other countries.~~

NK: This sentence may be necessary to be reviewed.

Please review the above. Control is essential otherwise the working trainers will be demobilised too soon.

Please also note that this entire clause is my suggestion only, if JICA and/or NK do not want it, please advise and I will delete all such training as necessary.

It is to be noted that by this request, the Employer is not suggesting that Operation Leaders shall always be locally employed and trained for the purpose, this remains the Contractor's choice based upon capability in accordance with the Contract and as determined by suitable availability. The emphasis here is on counterpart personnel who shall be assigned alongside qualified, skilled and experienced personnel who, on behalf of the Contractor, shall remain responsible for the performance of the Works at the Site.

Skill training may be omitted in full or in part for any Contractor's Personnel who, the Contractor has ascertained, hold valid academic, educational or vocational qualification and who are appropriately skilled and experienced in their respective trades or occupations in full compliance with GC 6.9 [Contractor's Personnel]. The Contractor shall report the names of any such Contractor's Personnel to the Engineer **for his consent**.

NK: We think "for his consent" can be replaced with "for information" as written in Issue 6.

See above notes, it really should be "consent"

~~1.21.21.3~~ Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

future to their working colleagues and compatriots.

(4) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his **information**.

(5) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

(6) Outline of such training shall be submitted with the Bid Stage Safety Plan. Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.

1.21.4 Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled or inexperienced foreign Contractor's Personnel.

1.22 Dangerous Work

1.22.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.

1.22.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.

1.22.3 The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [Permit System] that is to be worn conspicuously and be available for validation by the Engineer.

1.22.4 The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by **special** trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.

1.22.5 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.

1.22.6 The Contractor shall train and equip teams of selected workers at the Site for emergency rescue operation in accordance with JSSS 1.24 [Accident Response Plan].

future to their working colleagues and compatriots.

(4) The Contractor shall develop the syllabus and teaching hours appropriately and submit details to the Engineer for his **information**.

(5) The Contractor shall test and qualify such personnel and provide them with formal written confirmation of their training, testing and academic, educational or vocational qualification, with copies provided to the Engineer if so requested by the Engineer.

(6) **Outline of such training shall be submitted with the Bid Stage Safety Plan.** Details of the training shall be further developed in the Commencement Stage Safety Plan and onward.

1.21.4 Unless otherwise specified in the Particular Safety Specification, the Contractor shall not bring into the Country for use upon the Works any unqualified, unskilled ~~or inexperienced~~ foreign Contractor's Personnel.

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1.22.5 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.

1.22.6 The Contractor shall train and equip teams of selected workers at the Site **for emergency rescue operation in accordance with JSSS 1.24 [Accident Response Plan]**.

コメントの追加 [SS85]: "or inexperienced" may be deleted following the comment of JICA given to User Guide.

コメントの追加 [MJD86R85]: Please leave as it is, the original is correct I have given further explanation notes in the User Guide

<p>1.22 Dangerous Work</p> <p>1.22.1 Particular care shall be taken by the Contractor when performing any Dangerous Work.</p> <p>1.22.2 Contractor's Personnel who are to perform or be involved at the Site in the performance of Dangerous Work, in addition to the usual safety induction training, shall be given further special training according to the nature of the Dangerous Work upon which they are to be engaged so that they can safely perform such work.</p> <p>1.22.3 The HSO shall check and certify that each of the trained workers are authorised to be engaged upon particular types of Dangerous Work, by issuing an official permit in accordance with JSSS 1.23 [Permit System]</p>	<p>1.22.7 The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.</p> <p>1.22.8 Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.</p> <p>1.22.9 For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>1.22.10 Hazardous Substances.</p> <p>(1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.</p> <p>(2) The Contractor shall submit detailed Safety Plans and Method Statements with respect to the removal and disposal of the Hazardous Substances to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].</p> <p>1.23 Permit to Work System</p> <p>1.23.1 The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.</p> <p>1.23.2 The system shall be designed to control safety for Dangerous Work.</p>	<p>1.22.7 The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.</p> <p>1.22.8 Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.</p> <p>1.22.9 For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>1.22.10 Hazardous Substances.</p> <p>(1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.</p> <p>(2) The Contractor shall submit detailed Safety Plans and Method Statements with respect to the removal and disposal of the Hazardous Substances to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].</p> <p>1.23 Permit to Work System</p> <p>1.23.1 The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.</p> <p>1.23.2 The system shall be designed to control safety for Dangerous Work.</p>
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<p>that is to be worn conspicuously and be available for validation by the Engineer.</p> <p><i>have added the following because of apparent concerns over the meaning of JSS 2.5.1.(3)</i></p> <p>1.22.4 The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre-work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist (JC33) trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.</p> <p><i>JC33: specially</i> <i>NK5/6: To MD, Please check it.</i></p> <p>1.22.5 A specially trained Operation Leader shall always be assigned to work full-time with every worker or team of workers engaged upon Dangerous Work.</p> <p>1.22.6 The Contractor shall select, train and equip a specialist rescue team of teams of selected workers at the Site for emergency rescue operation in accordance with JSS 1.24.6 and 1.24.7, who can be called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated when working on Dangerous Work and to provide suitable, specialist and appropriate first aid treatment. Workers in such teams shall be allowed to continue with their normal work when not required for emergency rescue. (JC34).</p> <p><i>JC34: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.</i> <i>NK5/6: Will modify as commented.</i></p> <p>⊕ Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes/measures. (JC35)</p> <p><i>NK: Harness is basically used now and belts is not, so deletion of belt is made.</i></p> <p><i>Please do not delete, safety belts are still used for PFRS and for other purposes, they are defined in Annex 1.1 and specified in Chapter 2.</i></p> <p><i>The following subclause needs to be deleted, it is the Contractor not the Employer that determines what is necessary according to the scope of Works.</i></p> <p><i>JC35: Move to 1.24</i> <i>NK5/6: Will modify as commented.</i></p> <p>1.22.7 The requirement for rescue teams and rescue equipment shall be specified in the Particular Safety Specification.</p> <p>1.22.8 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC36).</p> <p><i>JC36: ditto</i> <i>NK5/6: Will modify as commented.</i></p> <p>1.22.9 The Contractor shall prepare and implement procedures for effective safety control of Dangerous Work. Such procedures may include zoning arrangements whereby different degrees of risk are separately categorised into different levels of requirement. The contents of this shall be included in the Method Statement and Safety Plan.</p> <p>1.22.10 Signage shall clearly describe the Dangerous Work and state the reasons why the area is dangerous.</p>	<p>1.23.3 The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.</p> <p>1.23.4 Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.</p> <p>1.23.5 The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.</p> <p>1.24 Accident Response Plan</p>	<p>1.23.3 The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.</p> <p>1.23.4 Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.</p> <p>1.23.5 The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.</p> <p>1.24 Accident Response Plan</p>
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コメントの追加【伊藤34】: specially ?

コメントの追加【岡本35】: 1.22.6 to 1.22.9 are relevant not only to Dangerous Work. "Rescue" is also mentioned in 1.24.6 more in general. So, integrated with 1.24.6.

コメントの追加【伊藤36】: Move to 1.24

コメントの追加【伊藤37】: ditto

<p>1.22.11 For measures for prohibiting entry, methods of demarcation and further definition of Dangerous Work, refer to JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>1.22.12 Hazardous Substances.</p> <p>(1) If the Contractor during the execution of the Works, encounters and is required by the Particular Safety Specification or instructed by the Engineer to remove any Hazardous Substances (for example: asbestos and similarly dangerous or hazardous materials), the Contractor shall employ suitable specialists Subcontractor(s) (JC37) that are appropriately and specifically qualified, skilled and experienced in the safe and environmentally acceptable removal and disposal of the Hazardous Substances.</p> <p>JC37: not necessarily Subcontractors NK5/6: Will modify as commented.</p> <p>(2) The Contractor shall obtain the Engineer's consent for such specialist Subcontractors and their submit detailed Safety Plans and Method Statements with respect to the removal and disposal of the Hazardous Substances shall also be submitted (JC38) to the Engineer in accordance with JSSS 1.7 [Contractor's Safety Plans] and JSSS 1.9 [Contractor's Method Statements].</p> <p>JC38: modified accordingly NK5/6: Will modify as commented.</p>	<p>1.24.1 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.</p> <p>1.24.2 Unless otherwise specified in the Particular Safety Specification, medical, first aid and related services and facilities at the Site for accidental injuries shall be made available free of charge for the use of the Contractor's Personnel, the Employer's Personnel-all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such medical services and facilities shall also be made available free of charge for the family members of the aforementioned personnel/persons.</p>	<p>1.24.1 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.</p> <p>1.24.2 Medical first aid and related services and facilities at the Site for accidental injuries shall be made available free of charge. If so specified in the Particular Safety Specification, such medical services and facilities shall also be made available free of charge for the family members of the aforementioned personnel/persons.</p>
<p>1.23 Permit to Work System</p> <p>1.23.1 The Contractor shall prepare and implement a "Permit to Work System" and a description of this shall be included in the Safety Plan.</p> <p>1.23.2 The system shall be designed to control safety for Dangerous Work all types of high-risk work likely to be encountered, including for example: (JC39)</p> <p>JC39: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work. NK5/6: Will modify as commented.</p> <p>1.23.3 Dangerous Work such as work in Confined Spaces and work mentioned in JSSS 2.3.3 Example of Dangerous Work.</p> <p>There is no need to change this or give any examples, please refer to the definition of Dangerous Work in Annex 1.1. If you insist, change to "for example" as in the following sub-clause.</p> <p>(a) Work in elevated positions, for example, transmission towers ladders and scaffolding, roof or ceiling work.</p> <p>(b) Work where there is a risk of collapse such as in Excavation Works and Foundation Piling Works.</p> <p>(c) Diving Works.</p>	<p>1.24.3 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.</p> <p>1.24.4 The Contractor shall provide the following medical and first aid facilities:</p> <p>(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.</p> <p>(2) First aid training, appointment of first aiders and dissemination of information.</p> <p>(3) Type of communication facilities and measures for emergency response.</p> <p>(4) Medical Facilities on the Site together with description of equipment and consumables.</p> <p>(5) Temporary water and power supply to maintain use during mains supply failure.</p> <p>(6) Transportation facilities to be provided to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.</p> <p>(7) Additional facilities specified in the Particular Safety Specification, if any.</p>	<p>1.24.3 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.</p> <p>1.24.4 The Contractor shall provide the following medical and first aid facilities:</p> <p>(1) Deployment of appropriate first aid appliances, aids, instruments and medicines.</p> <p>(2) First aid training, appointment of first aiders and dissemination of information.</p> <p>(3) Type of communication facilities and measures for emergency response.</p> <p>(4) Medical Facilities on the Site together with description of equipment and consumables.</p> <p>(5) Temporary water and power supply to maintain use during mains supply failure.</p> <p>(6) Transportation facilities to be provided to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.</p> <p>(7) Additional facilities specified in the Particular Safety Specification, if any.</p>
<p>NK: We consider that permit will be practically issued to works such dangerous works as that in confined space and tower, etc. There is risk in works on ladders and scaffolding, however these are so many workers working there and not so high risk. We are better to specify higher risk works than normal risk ones.</p> <p>I believe that this will vary according to the actual project scope and I recommend to leave as it is. It is better to be left to the discretion of the HSO.</p> <p>1.23.4 The system shall ensure that all foreseeable risks have been considered and that the required control measures for safe working have been implemented before any specific work is permitted to proceed.</p>	<p>1.24.5 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical services and facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as</p>	<p>1.24.5 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical services and facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional</p>

コメントの追加 [伊藤38]: not necessarily Subcontractors

コメントの追加 [伊藤39]: modified accordingly

コメントの追加 [伊藤40]: Agree with MD's comments. All the examples stated here (i.e. Excavation, Diving, etc.) must be Dangerous Work.

<p>1.23.5 Permits shall certify that workers are protected when they perform and workers shall sign the permit and register to show that they understand the risks and the precautions necessary.</p> <p>1.23.6 The HSO shall assess the work and check safety at each stage and manage the Permit to Work System.</p> <p>1.24 Accident Response Plan</p> <p>1.24.1 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC40)</p> <p>JC40: Moved to 1.24.5. NK5/6: Will modify as commented.</p> <p>NK-1: JICA commented to modify and add "so specified in the Specification" to 1.20.2 in Issue 6. <i>NK consider that "as specified in Particular Safety Specification" between "the Works," and "the Contractor" if we follow JICA's comment.</i></p> <p>NK-2: JICA commented that they want to use "as specified in Particular Safety Specification" more than "unless otherwise specified in Particular Safety Specification" because the Employer shall be involved to specify his requirements. (Particular Safety Specification =PSSS) <i>Can you specify as JICA's request to use "as specified in PSSS"</i></p> <p>1) I do not recommend any use or reliance on "as specified in PSSS". If something is then not so mentioned in PSSS, (even when it should be), this means that there is no requirement stated.</p> <p>2) "Unless otherwise specified" followed by stated requirements is the preferred and better method as the stated requirements in JSSS are then a default and even if nothing further is stated in PSSS, there will always be these requirements to rely on. This is a "failsafe" in JSSS production.</p> <p>3) More importantly, it must be understood that the availability of these facilities is a total Contractor responsibility under FIDIC (Clause 6.7), under which the Contractor must provide such facilities, whether specified further by the Employer or not and the PSSS must not compromise this.</p> <p>4) The problem is that work in distant and remote places is a very common feature of JICA projects (such as hydro, water supply, power, irrigation etc.) and frequently proper health and safety facilities are just not made available by the Contractor at the Site at the expense of human life and safety. Often there are no local health authorities, or they are not equipped or not capable or they are too far away to be of any value. Very often contractors do not provide facilities to save money and health and safety suffers badly. This is fairly common practice and a common problem.</p> <p>5) The changes are suggested as a means of improving this situation and they should therefore be viewed against this background.</p> <p>NK-3: JICA want to clarify who "other persons who are entitled to be on the Site" are, and where "other places (if any) are. other persons who are entitled to be on the Site" is from FIDIC (Clause 4.8 and others) and for whom the Contractor has responsibility for care, protection and safety. This is all embracing and extends beyond Contractor's Personnel and Employer's Personnel to allow anyone who has a legal entitlement to be there (e.g. other contractor's, residents, others who have a right of way through the site, families of site staff if formally living there and others). I have stated this so that the extent of contractor's compliance with JSSS is clear and so that it does not diverge from the</p>	<p>specified in the Particular Safety Specification and as are necessary to fully protect all relevant personnel.</p> <p>1.24.6 The Contractor shall train selected Contractor's Personnel to perform emergency rescue in a safe manner in the event of any accident. Workers so trained are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.</p> <p>1.24.7 Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.</p> <p>1.24.8 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.</p> <p>1.24.9 Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].</p> <p>1.24.10 Adequate first aid equipment and supplies shall in any case be readily available at the Site and as referred to in JSSS 2.9 [PPE and First Aid].</p> <p>1.25 Measures at the Time Accidents Occur</p> <p>1.25.1 When an accident occurs, the HSO shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:</p> <p>(1) Safely locate and extract casualties. (2) Provide first aid treatment at the Site. (3) Implement Secondary accident prevention activities, including:</p>	<p>services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all relevant personnel.</p> <p>1.24.6 The Contractor shall train selected Contractor's Personnel to perform emergency rescue in a safe manner in the event of any accident. Workers so trained are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.</p> <p>1.24.7 Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures.</p> <p>1.24.8 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident.</p> <p>1.24.9 Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].</p> <p>1.24.10 Adequate first aid equipment and supplies shall in any case be readily available at the Site and as referred to in JSSS 2.9 [PPE and First Aid].</p> <p>1.25 Measures at the Time Accidents Occur</p> <p>1.25.1 When an accident occurs, the HSO shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:</p> <p>(1) Safely locate and extract casualties. (2) Provide first aid treatment at the Site. (3) Implement Secondary accident prevention activities, including:</p>
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コメントの追加【伊藤41】: Moved to 1.24.5.

<p>contract. I do not recommend that it is changed, and any other places as may be specified in the Contract as forming part of the Site comes from the definition of Site (GC 1.1.6.7) which I have already deleted throughout for clarity and for which will consider and may add an appropriate note in the User Guide.</p> <p>1.24.2 The Contractor shall be responsible for responding to and treating accidents at the Site in an efficient and dedicated manner with the provision of rescue and treatment services using trained personnel with experienced and qualified medical staff and adequate and equipped facilities at the Site.</p> <p>1.24.3 Unless otherwise specified in the Particular Safety Specification, (JC41) Medical, first aid and related services and facilities at the Site for accidental injuries shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site. (JC42) If so specified in the Particular Safety Specification, such medical services shall also be made available for free of charge for the family members of the aforementioned personnel/persons.</p> <p>NK: JICA want to clarify where "other places (if any) are." Deleted see above.</p> <p>JC41: Free of charge for everyone" need not to be as default. I don't believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor! If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.</p> <p>JC42: See comment to 1.2.2 (6).</p> <p>NK5/6: Will modify as commented.</p> <p>NK5/6: YH inquired if "the sentence of "the family members of all other persons" is necessary to be deleted.</p> <p>1.24.4 The Contractor shall prepare an Accident Response Plan as a part of the Safety Plan.</p> <p>1.24.5 Unless otherwise specified in the Particular Safety Specification, the additional facilities shall for example include The Contractor shall provide the following medical and first aid facilities:</p> <p>(1) <u>Deployment of appropriate first aid appliances, aids, instruments and medicines.</u></p> <p>(2) <u>First aid training, appointment of first aiders and dissemination of information.</u></p> <p>(3) <u>Type of communication facilities and measures for emergency response.</u></p> <p>(4) Medical staff to be assigned at the Site.</p> <p>(4) <u>Medical Facilities on the Site together with description of equipment and consumables.</u></p> <p>(5) <u>Temporary water and power supply to maintain use during mains supply failure.</u></p> <p>(6) Transportation facilities, Ambulance services to be provided, including drivers and attendants to efficiently and carefully transport casualties to clinics on Site or hospitals off the Site.</p> <p>(7) <u>Additional facilities specified in the Particular Safety Specification, if any.</u></p> <p>Medical staff to be assigned at the Site.</p>	<p>(a) Preserving the accident site, make safe and prevent anyone interfering or entering;</p> <p>(b) Discontinuing construction work related to or in the vicinity of the accident; and</p> <p>(c) Implementing any further measures instructed by the Engineer.</p> <p>1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.</p> <p>(1) The Contractor shall inform the Engineer and submit details of any accident.</p> <p>(2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.</p> <p>(3) The Accident Report shall include details of the recommended counter-measures to prevent any recurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].</p> <p>1.25.3 For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].</p> <p>1.26 Emergency Response Plan</p> <p>1.26.1 To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.</p> <p>1.26.2 The Contractor shall take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, and to avoid, overcome or lessen the effects to a reasonable extent.</p> <p>1.26.3 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:</p>	<p>(a) Preserving the accident site, make safe and prevent anyone interfering or entering;</p> <p>(b) Discontinuing construction work related to or in the vicinity of the accident; and</p> <p>(c) Implementing any further measures instructed by the Engineer.</p> <p>1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.</p> <p>(1) The Contractor shall inform the Engineer and submit details of any accident.</p> <p>(2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.</p> <p>(3) The Accident Report shall include details of the recommended counter-measures to prevent any recurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].</p> <p>1.25.3 For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].</p> <p>1.26 Emergency Response Plan</p> <p>1.26.1 To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and shall be aware when heavy winds, storms, rainfall or snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.</p> <p>1.26.2 The Contractor shall take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, and to avoid, overcome or lessen the effects to a reasonable extent.</p> <p>1.26.3 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:</p>
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- コメントの追加 [SS87]: Shall we replace "the Contractor" with "the HSO"?
- コメントの追加 [MJD88R87]: Yes well spotted changed already
- コメントの追加 [伊藤42]: "Free of charge for everyone" need not to be as default. I don't believe the wife of the Director of project management unit in Hanoi or Jakarta should be able to benefit from free medical services provided by the Contractor!
- If the nature of the Works (e.g. very remote area, etc) justifies, the Employer should specify additional requirements in the Particular Safety Specification.
- コメントの追加 [SS89]: ditto
- コメントの追加 [MJD90R89]: ditto
- コメントの追加 [伊藤43]: See comment to 1.2.2 (6)

<p>5. — Emergency medical services where necessary. (JC43)</p> <p>NK: We feel that the provision of medic services seems excessive unless health insurance can cover it.</p> <p>disagree if it means saving a life. Whether health insurance covers it or not is irrelevant. There will be situations where it is available and necessary to save life, so can JICA say that fatality is acceptable as the alternative was too expensive?</p> <p>JC43: Where the Site is located in a large distance from a sufficiently equipped hospital.</p> <p>NK5/6: Will modify as commented.</p> <p>1.24.61.1.1 — Medical Facilities on the Site together with description of equipment and consumables.</p> <p>1.24.71.1.1 — Temporary water and power supply to maintain use during mains supply failure.</p> <p>1.24.81.1.1 — Type of communication facilities and measures for emergency response.</p> <p>1.24.91.1.1 — Deployment of appropriate first aid appliances, aids, instruments and medicines.</p> <p>1.24.10 First aid training, appointment of first aiders and dissemination of information.</p> <p>1.24.11.24.6 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of medical facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC44)</p> <p>JC44: See comment to 1.2.2 (6)</p> <p>NK5/6: Will modify as commented.</p> <p>1.24.121.24.7 Where the Works include the following for example, {The Contractor shall train selected Contractor's Personnel to perform emergency rescue operations in a safe manner in the event of any accident, Workers so trained, (JC45) are called upon in the event of any emergency to rescue any person(s) who may become trapped or injured or otherwise affected or incapacitated and to provide suitable, specialist and appropriate first aid treatment. They shall be allowed to continue with their normal work when not required for emergency rescue.</p> <p>JC45: Merged with 1.22.6</p> <p>NK5/6: Will modify as commented.</p> <p>(1) — Work on or near existing electrical equipment, cables, wiring, services and systems.</p> <p>(2) — Dangerous Work such as Confine Spaces, work at height.</p> <p>(3) — NK: We consider describing example as above.</p> <p>(4) — Please see above notes and Annex 1.1 Definitions. I do not agree that any such examples are necessary —</p> <p>(5)(1) Diving Work. (JC46)</p> <p>JC46: Diving work is also Dangerous Work</p>	<p>(1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.</p> <p>(2) The safety and stability of the Works and Goods.</p> <p>(3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.</p> <p>1.26.4 Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage from such flooding, earthquake or volcanic activity.</p> <p>Such measures to be implemented shall include:</p> <p>(1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to all relevant persons, including third parties and property not connected with the Works but potentially affected thereby.</p> <p>(2) Provision of temporary support to all sides and soffits of excavations or portal of tunnelling of sufficient strength, durability and suitability.</p> <p>(3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.</p>	<p>(1) The safety of all persons entitled to be on the Site, whether engaged in construction operations or otherwise on or in the vicinity of or adjacent to the Site.</p> <p>(2) The safety and stability of the Works and Goods.</p> <p>(3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.</p> <p>1.26.4 Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage from such flooding, earthquake or volcanic activity.</p> <p>Such measures to be implemented shall include:</p> <p>(1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to all relevant persons, including third parties and property not connected with the Works but potentially affected thereby.</p> <p>(2) Provision of temporary support to all sides and soffits of excavations or portal of tunnelling of sufficient strength, durability and suitability.</p> <p>(3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.</p>
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コメントの追加【伊藤44】: See comment to 1.2.2 (6)

コメントの追加【伊藤45】: Merged with 1.22.6

コメントの追加【伊藤46】: Diving work is also Dangerous Work

<p>NK5/6: We cannot understand how to this comment (JC46). To MD, please review this comment.</p> <p>1.24.13 Similar special circumstances-</p> <p>1.24.14.1.24.8 Rescue equipment shall include respiratory protective equipment for rescue operations, where the nature of the Works would dictate, safety extraction belts/harnesses/ropes measures. (JC47)</p> <p>JC47: Move from 1.22. this should be "may" since the nature of Works may vary</p> <p>NK5/6: To MD, please review this comment.</p> <p>1.24.15.1.24.9 If an accident occurs and rescue is required, the Contractor shall prohibit any personnel to engage in rescue activities other than those trained to do so in order to prevent secondary accident. (JC48)</p> <p>JC48: Move from 1.22</p> <p>NK5/6: Will modify as commented.</p>	<p>1.26.5 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [Contractor's General Obligations] and JSSS 1.9 [Contractor's Method Statements].</p> <p>1.26.6 The Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.</p>	<p>1.26.5 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [Contractor's General Obligations] and JSSS 1.9 [Contractor's Method Statements].</p> <p>1.26.6 The Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.</p>
<p>1.24.16.1.24.10 All rescue team members Workers trained for emergency rescue, in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED in accordance with the requirements of JSSS 2.9 [PPE and First Aid].</p> <p>1.24.17.1.24.11 Adequate first aid equipment and supplies shall in any case be readily available at the Site as recommended by OSHA and as referred to in JSSS 2.9 [PPE and First Aid].</p> <p>NK: JICA wants specific clauses in OSHA. We can mention OSHA, Part 1910 - Occupational Safety and Health Standards, Subpart K Medical and First Aid. Better to delete reference here "as recommended by OSHA" and include your clear requirements in JSSS 2.9 [PP and First Aid]. (JC49)</p> <p>JC49: Agree.</p> <p>NK5/6: Will modify as agreed.</p>	<p>1.26.7 The Emergency Response Plan, shall cover:</p> <p>(1) Evacuation plan, showing evacuation routes and assembly points.</p> <p>(2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.</p> <p>(3) Emergency contact system.</p> <p>(4) Use of existing and available medical and other related facilities.</p> <p>(5) Emergency stocks of bottled water, lights, ropes, shovels.</p> <p>The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.</p>	<p>1.26.7 The Emergency Response Plan, shall cover:</p> <p>(1) Evacuation plan, showing evacuation routes and assembly points.</p> <p>(2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.</p> <p>(3) Emergency contact system.</p> <p>(4) Use of existing and available medical and other related facilities.</p> <p>(5) Emergency stocks of bottled water, lights, ropes, shovels.</p> <p>The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.</p>
<p>1.25 Measures at the Time Accidents Occur</p> <p>1.25.1 When an accident occurs, the HSO the Contractor shall immediately discontinue the concerned work, inform the Engineer and take all efforts to:</p> <p>NK: JICA added in the last comment. NK: We consider "the HSO" shall be "the Contractor" as mentioned in Issue 6. (JC50) I disagree completely and do not recommend this (or any such) change. As I have explained repeatedly, the HSO must have this authority in order to fulfill his safety control functions effectively. The HSO is responsible for safety, the Contractor's Representative is responsible for making a profit and these interests are not always compatible.</p> <p>JC50: Agree.</p> <p>NK5/6: Will modify as agreed.</p> <p>(1) Safely locate and extract casualties.</p> <p>(2) Provide first aid treatment at the Site.</p> <p>(3) Implement Secondary accident prevention activities, including:</p> <p>(a) Preserving the accident site, make safe and prevent anyone interfering or entering;</p> <p>(b) Discontinuing construction work related to or in the vicinity of the accident; and</p> <p>(c) Implementing any further measures instructed by the Engineer.</p> <p>1.25.2 Report of Accident Occurrence, Cause, Investigation, Result and Recurrence, Prevention Measures.</p>	<p>1.26.8 The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.</p> <p>The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.</p>	<p>1.26.8 The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.</p> <p>The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.</p> <p>The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.</p>

コメントの追加【伊藤47】: Move from 1.22

This should be "may" since the nature of Works may vary

コメントの追加【伊藤48】: Move from 1.22

コメントの追加【伊藤49】: Agree

コメントの追加【伊藤50】: Agree

<p>(1) The Contractor shall inform the Engineer and submit details of any accident.</p> <p>(2) Having investigated and established the cause of any accident, the Contractor shall report the detail and conclusion of the investigation as soon as practicable and in any event no later than 48 hours after its occurrence, or as may be instructed otherwise by the Engineer.</p> <p>(3) The Accident Report shall include details of the HSO's the Contractor's recommended counter-measures to prevent any recurrence and shall be in the format included in JSSS Annex 1.3 [Additional Contractor Forms].</p> <p>Please see above notes on this subject. This should remain as the HSO. I disagree and do not recommend this (or any such) change.</p> <p>1.25.3 For resumption of work procedures, refer to JSSS 1.14 [Procedure for Resuming the Works].</p> <p>1.26 Emergency Response Plan</p> <p>1.26.1 To the extent reasonably possible, the Contractor shall keep himself fully informed at all times of likely forecasted climatic conditions, from TV, radio and internet and as far as reasonably possible, shall be aware when heavy winds, storms, rainfalls, snowfall and electrical storms or other adverse climatic conditions are likely and can be reasonably anticipated.</p> <p>The Contractor shall the take all necessary measures to protect Contractor's Personnel, the Works and all Goods for incorporation therein from injury or damage caused by any such adverse climatic conditions, where the Contractor could reasonably have anticipated the events and provided against them before entering into the Contract and which, having arisen, the Contractor could have and to reasonably avoided, or overcome or lessened the effects to a reasonable extent. (JC51)</p> <p>NK-1: Can we delete one of two "reasonably possible" above? Yes, delete as above.</p> <p>NK-2: We considers "where the ... into the Contract" is not necessary to mentioned here as discussed in 2.7.1 (2).</p> <p>With the changes to your draft that have now been agreed, I have already modified JSS 1.7 and I thought that the above can now be deleted as shown, however your later comments against 1.26.5 are confusing me greatly and I am unsure. Can you please answer my request against 1.26.5 first and I can then modify the above if necessary.</p> <p>JC51: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.</p> <p>NK5/6: Will modify as commented.</p> <p>1.26.2 The Contractor shall keep all areas of the Site, free from surface water and ground water at all times and by whatever means are necessary. This shall include all newly exposed ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, as necessary to ensure:</p> <p>NK: The sentence is too long for me to understand well. May I ask to make two simple sentences?</p> <p>It is perfectly correct as it is however have split it. (JC52)</p> <p>JC52: Thank you for being non-native friendly. FIDIC 1999 and MDB version have been supported worldwide because of its "understandability". Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.</p> <p>NK5/6: No comment.</p> <p>(1) The safety of Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site, whether engaged in</p>	<p>The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.</p> <p>The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:</p> <p>(1) Employer's Personnel at the Site and also at their respective head office where different.</p> <p>(2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.</p> <p>(3) Contractor's Personnel at the Site and also at the head office where different.</p> <p>(4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.</p> <p>1.26.9 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system. Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.</p> <p>1.26.10 If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.</p> <p>1.26.11 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.</p> <p>1.26.12 For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].</p> <p>1.27 Contractor's Safety Committee and Regular Safety Meetings</p> <p>1.27.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.</p> <p>1.27.2 Members of the Contractor's Safety Committee shall include:</p> <p>(1) Contractor's Representative.</p> <p>(2) HSO.</p> <p>(3) Medical and first aid staff.</p> <p>(4) Contractor's senior site staff.</p> <p>(5) Contractor's head office safety manager (as necessary).</p> <p>(6) Subcontractors' representatives, health and safety personnel, site staff.</p> <p>(7) Representative of labour union, if any.</p>	<p>The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:</p> <p>(1) Employer's Personnel at the Site and also at their respective head office where different.</p> <p>(2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.</p> <p>(3) Contractor's Personnel at the Site and also at the head office where different.</p> <p>(4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different.</p> <p>1.26.9 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system. 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コメントの追加【伊藤51】: JICA support NK's comment. The Contractor shall be responsible for the safety whether He "could have anticipated before entering in to contract" or not.

コメントの追加【伊藤52】: Thank you for being non-native friendly. FIDIC 1999 and MDB version have been supported worldwide because of its "understandability". Their English is correct and easy to understand even for non-native. JSSS should be drafted in the same way.

<p>construction operations or otherwise on or in the vicinity of or adjacent to the Site.</p> <p>(2) The safety and stability of the Works and Goods.</p> <p>(3) The safety and stability of all ground surfaces, excavated areas and/or excavations for structures, piling, trenches, pits, shafts, tunnels and the like, to prevent landslides due to surface water from rainfall and snowmelt, tidal water, ground water and any changes in ground water level, river or stream erosion, human activity and the like.</p> <p>1.26.3 Where, due to the location of the Site, there is a risk of flooding, earthquake or volcanic activity, the Contractor shall take measures to prevent damage including damage from landslides and consequent injury, damage and flooding arising from such flooding, earthquake or volcanic activity.</p> <p>NK: The flooding is hardly occurred by earthquake and volcanic activity. Therefore, we propose the above sentence is modified as above and below.</p> <p>Yes, this can be changed as above.</p> <p>Such measures to be implemented shall include:</p> <p>(1) Avoiding the use of permanent or temporary earth dams, enclosures, containment structures, spoil heaps or the like where the effect of the above described climatic, seismic or volcanic conditions could weaken or destroy such structures and potentially create the consequent risk of danger to Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site and (JC53) to any third parties and neighbours and property not connected with the Works but potentially affected thereby.</p> <p>JC53: See 1.2.2 (6). NK5/6: Will modify as commented.</p> <p>(2) Provision of temporary support to all sides and soffits of excavations or portal of portal of (JC54) tunnelling of sufficient strength, durability and suitability.</p> <p>NK: We considers tunnel is strong enough to earthquake/volcanic activity but weak to flood water entering into the tunnel. My recommendation is still (as written) to leave it as it was and make this as wide a term as possible to increase the coverage. There is no acceptable definition of "portal" and this change just introduces argument on interpretation, why change? NK: We accept to leave as it is. JC54: Better to add. NK5/6: Will modify as commented.</p> <p>(3) Provision of sufficient temporary drains and drain trenches to assist the flow of water and any further measures to prevent the effect of water entry to the Works, including pumping and provision of power for such measures.</p> <p>1.26.4 Measures as required by the above shall be described by the Contractor in the Method Statements which may be requested by the Engineer in accordance with GC 4.1 [Contractor's General Obligations] and JSSS 1.9 [Contractor's Method Statements].</p> <p>1.26.5 Unless otherwise specified in the Particular Safety Specification, the Contractor shall prepare an Emergency Response Plan as a part of the Safety Plan.</p> <p>This plan shall comprise a procedure describing the provision of assistance by the Contractor with search and contact activities and the use</p>	<p>(8) (If necessary) Representatives of the relevant government authorities and agencies.</p> <p>(9) Any other necessary personnel.</p> <p>1.27.3 The HSO shall be the chairman of the Safety Committee.</p> <p>1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:</p> <p>(1) Frequency of the meetings: At least once a month.</p> <p>(2) Agenda:</p> <p>(a) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence;</p> <p>(b) Monthly or weekly schedule of important health and safety matters;</p> <p>(c) Feedback on the regular safety, coordination and other meetings with the Engineer;</p> <p>(d) Safety instructions received from the Engineer;</p> <p>(e) Items to be coordinated with police, fire department and other related organisations;</p> <p>(f) Compliance and registration requirements under the Laws of the Country;</p> <p>(g) Safety and health awards, media attention and the like;</p> <p>(h) Hazards, safety and health problems identified by any members of the Safety Committee;</p> <p>(i) Effectiveness of existing Safety Plans and suggestions for revision and improvement; and</p> <p>(j) Other matters.</p> <p>1.27.5 Report on the Safety Committee Meetings</p> <p>The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.</p> <p>1.28 Engineer's Regular Safety Meetings</p> <p>1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:</p> <p>(1) Frequency of the meetings: Once a month.</p> <p>(2) Agenda:</p>	<p>1.27.3 The HSO shall be the chairman of the Safety Committee.</p> <p>1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:</p> <p>(1) Frequency of the meetings: At least once a month.</p> <p>(2) Agenda:</p> <p>(a) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence;</p> <p>(b) Monthly or weekly schedule of important health and safety matters;</p> <p>(c) Feedback on the regular safety, coordination and other meetings with the Engineer;</p> <p>(d) Safety instructions received from the Engineer;</p> <p>(e) Items to be coordinated with police, fire department and other related organisations;</p> <p>(f) Compliance and registration requirements under the Laws of the Country;</p> <p>(g) Safety and health awards, media attention and the like;</p> <p>(h) Hazards, safety and health problems identified by any members of the Safety Committee;</p> <p>(i) Effectiveness of existing Safety Plans and suggestions for revision and improvement; and</p> <p>(j) Other matters.</p> <p>1.27.5 Report on the Safety Committee Meetings</p> <p>The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.</p> <p>1.28 Engineer's Regular Safety Meetings</p> <p>1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:</p> <p>(1) Frequency of the meetings: Once a month.</p> <p>(2) Agenda:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p>
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コメントの追加【伊藤53】: See 1.2.2 (6)

コメントの追加【伊藤54】: Better to add

~~of any remaining facilities after possible exceptional events or circumstances, including but not restricted to Force Majeure events. The plan does not require the Contractor to provide repair, reinstatement or medical treatment services. These services are beyond the scope of JSSS and shall be the subject of instructions issued under the Contract. (JC55)~~

NK: We consider that the Contractor may have difficulty to assume what activities can be made.

We propose to delete the sentences underlined for the assistance as you also mentioned beyond the scope of JSSS.

Which underlining? In 1.26.6
Please see 1.26.6 for my assumption of your requirements.
Your draft has never been clear to me and I am still having difficulty to understand what your draft means and what are your intentions and requirements.
Please note:

1. The Contractor can only plan for what he can reasonably foresee, anticipate and
2. It is necessary to state this so that no confusion is introduced with PFDIC GC 19.
3. This only leaves simple search and contact activities which has little or no meaning.

JSSS cannot specify what other measures the Contractor is to take after a Force majeure event (which I guess your emergency plan is trying to cover) as these events and any counter measures cannot be predicted.

Please can you clarify exactly what you are requiring the Contractor to do in the event of an earthquake, hurricane, typhoon or volcanic activity, so I can finalise this clause and also JSSS 2.2.

JC55: Better to jump to 1.26.6 without this.
NK5/6: Will modify as commented.

1.26.6 The Emergency Response Plan, shall cover:

- (1) Evacuation plan, showing evacuation routes and assembly points.
- (2) Emergency communication facilities such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such facilities shall be inspected by the HSO and maintained at all times so that they can be utilised in any emergency.
- (3) Emergency contact system.
- (4) Use of existing and available medical and other related facilities.
- (5) Emergency stocks of bottled water, lights, ropes, shovels.

The Contractor shall provide and maintain in a state of readiness such equipment described above, that will remain useable in the case of an emergency. Where applicable sufficient back-up power shall be provided when power may be knocked out, long-life batteries, power generators with fuel capacity to allow long term use and the like.

1.26.7 The emergency contact system shall describe measures for quickly establishing locations, methods of contact and a listing of the persons, organisations and departments, that need to be located and contacted in the event of an emergency.

The list shall be posted in a visible location in the Contractor's Site office with a copy in the Employer's and Engineer's Site offices so that all personnel are informed.

The emergency contact list shall include name(s) of the person(s) responsible for making the contact, relevant contact persons, all with their respective telephone numbers and where relevant their radio contact.

- (a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;
- (b) Monthly or weekly schedule of important health and safety matters;
- (c) Accidents, fatalities, injuries in the previous month and measures to be taken to prevent any reoccurrence;
- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Status of resolution of previous problems;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country; and
- (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.
- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.
- (5) The Engineer shall issue a formal instruction for any variation requests.

1.29 Project Safety Committee

1.29.1 On larger Projects with multiple contract packages and contractors and unless otherwise stated in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.

1.29.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:

- (1) The Employer.
- (2) The Engineer(s).
- (3) The Contractor's Representative(s).
- (4) Health and Safety Officers of all members.

1.29.3 The Chairman of the Safety Committee shall be the Employer.

1.29.4 The Employer shall hold Project Safety Committee meetings, periodically as requested by the Employer.

- (b) Monthly or weekly schedule of important health and safety matters;
- (c) Accidents, fatalities, injuries in the previous month and measures to be taken to prevent any reoccurrence;
- (d) Hazards, safety and health problems identified by any members of the Safety Committee;
- (e) Status of resolution of previous problems;
- (f) Items to be coordinated with police, fire department and other related organisations;
- (g) Compliance and registration requirements under the Laws of the Country; and
- (h) Safety and health awards, media attention and the like.

1.28.2 Report on the Engineer's Regular Safety Meetings:

- (1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.
- (2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.
- (3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.
- (4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.
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コメントの追加 [岡本55]: Better to jump to 1.26.6 without this.

<p>The list shall include contact details and any further relevant information for the following parties, and define the extent to which contact is to be made in accordance with the type of emergency:</p> <ol style="list-style-type: none"> (1) Employer's Personnel at the Site and also at their respective head office where different. (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like. (3) Contractor's Personnel at the Site and also at the head office where different. (4) Subcontractors personnel and the personnel of any other contractors or suppliers at the Site and also at the head office where different. <p>1.26.8 Unless otherwise specified in the Particular Safety Specification, the Contractor shall conduct emergency response training based on the Emergency Response Plan at least every six (6) months, including training all personnel at the site on evacuation plan and emergency contact system.</p> <p>Training shall be provided for all Employer's Personnel, Contractor's Personnel and all other persons entitled to be on the Site. (JC56)</p> <p>JC56: See 1.2.2(6). NK5/6: To Md, please review this comment.</p> <p>Details of the training shall be included as a part of the Emergency Response Plan and included with the Safety Plan.</p> <p>1.26.9 If and when an emergency occurs, the Contractor shall share necessary information amongst prescribed persons on the emergency contact list described above and take appropriate measures including work discontinuation, evacuation of workers, making the Works, all premises and Contractor's Equipment safe, etc., all as circumstances reasonably permit and as instructed by the Engineer.</p> <p>1.26.10 The Contractor shall also allow use of existing medical facilities, ambulances and equipment all as circumstances reasonably permit or as instructed by the Engineer.</p> <p>1.26.11 For further measures and requirements refer to JSSS 2.7 [Adverse Weather Requirements].</p> <p>1.27 Contractor's Safety Committee and Regular Safety Meetings</p> <p>1.27.1 The Contractor shall create an internal Safety Committee to assist with promoting and maintaining effective health and safety management.</p> <p>1.27.2 Members of the Contractor's Safety Committee shall include:</p> <ol style="list-style-type: none"> (1) Contractor's Representative. (2) HSO. (3) Medical and first aid staff. (4) Contractor's senior site staff. (5) Contractor's head office safety manager (as necessary). (6) Subcontractors' representatives, health and safety personnel, site staff. (7) Representative of <u>labour union, if any Contractor's Personnel</u>. (8) (If necessary) Representatives of the relevant government authorities and agencies. 	<p>1.29.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.</p> <p>1.30 Health and Safety Coordination with Other Contractors</p> <p>1.30.1 Refer to GC 2.3 [Employer's Personnel] and GC 4.6 [Co-operation] regarding the respective obligations and requirements for the Contractor regarding cooperation with:</p> <ol style="list-style-type: none"> (1) The Employer's Personnel,. (2) Any other contractors employed by the Employer, (3) The personnel of any relevant authorities, who may be employed in the execution on or near the Site of any work not included in the Contract. <p>In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [Safety Procedures] and GC 4.18 [Protection of the Environment].</p> <p>The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.</p> <p>When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.</p> <p>When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number</p>	<p>1.29.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting.</p> <p>1.30 Health and Safety Coordination with Other Contractors</p> <p>1.30.1 Refer to GC 2.3 [Employer's Personnel] and GC 4.6 [Co-operation] regarding the respective obligations and requirements for the Contractor regarding cooperation with:</p> <ol style="list-style-type: none"> (1) The Employer's Personnel,. (2) Any other contractors employed by the Employer, (3) The personnel of any relevant authorities, who may be employed in the execution on or near the Site of any work not included in the Contract. <p>In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [Safety Procedures] and GC 4.18 [Protection of the Environment].</p> <p>The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.</p> <p>When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.</p> <p>When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.</p>
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コメントの追加【伊藤56】: See 1.2.2(6)

<p>(9) Any other necessary personnel.</p> <p>1.27.3 The HSO shall be the chairman of the Safety Committee.</p> <p>1.27.4 The Contractor shall arrange regular Safety Committee Meetings for the purpose of sharing information regarding health and safety management among the Contractor's Personnel:</p> <p>(1) Frequency of the meetings: At least once a month.</p> <p>(2) Agenda:</p> <p>(a) Hazards, safety and health problems identified by any members of the Safety Committee;</p> <p>(b) Monthly or weekly schedule of important health and safety matters;</p> <p>(c) Accidents, fatalities, injuries occurred in the previous month and measures to be taken to prevent any reoccurrence;</p> <p>NK: Are the phrases in red to be added? Is this sort of comment really necessary? Yes it can be changed but this is only an abbreviated sample agenda.</p> <p>(d) Feedback on the regular safety, coordination and other meetings with the Engineer;</p> <p>(e) Safety instructions received from the Engineer;</p> <p>(f) Items to be coordinated with police, fire department and other related organisations;</p> <p>(g) Compliance and registration requirements under the Laws of the Country;</p> <p>(h) Safety and health awards, media attention and the like; and</p> <p>(i) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(j) Other matters.</p> <p>NK: May we change the order as (a) is after (h) and (c) is before (a) for order of discussion. Again, is this sort of comment really necessary? I have changed this.</p> <p>1.27.5 Report on the Safety Committee Meetings</p> <p>The Contractor shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>A copy of this report shall be submitted to the Engineer within seven (7) days after the meeting and a further copy shall be included in the Contractor's monthly progress report.</p> <p>1.28 Engineer's Regular Safety Meetings</p> <p>1.28.1 The Engineer will arrange and host a regular safety meeting to be attended by representatives of the Employer and the Contractor for the purpose of sharing information regarding health and safety management among the representatives of the Employer and the Contractor. Parties present shall have the authority to represent the organisation they belong to on health and safety matters:</p> <p>(1) Frequency of the meetings: Once a month.</p> <p>(2) Agenda:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p>	<p>of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.</p> <p>1.30.2 The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.</p> <p>1.30.3 If any other contractors are employed by the Employer or if any relevant authorities responsible to the Employer are working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:</p> <p>(1) Frequency of the meetings: as and when considered necessary by Engineer.</p> <p>(2) Unless otherwise agreed, attendees shall include representatives of the Employer, Contractor and any other contractors and relevant authorities who may be employed in the execution of any work on or near the Site not included in the Contract</p> <p>(3) Agenda should relate to coordination among different contractors including for example:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any relevant authorities;</p> <p>(c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence;</p> <p>(d) Status of resolution of previous problems;</p> <p>(e) Items to be coordinated with police, fire department and other related organisations;</p> <p>(f) Compliance and registration requirements under the Laws of the Country;</p> <p>(g) Safety and health awards, media attention and the like; and</p> <p>(h) Other matters.</p> <p>1.30.4 Report on the Health and Safety Coordination Meetings:</p> <p>(1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p>	<p>1.30.2 The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.</p> <p>1.30.3 If any other contractors are employed by the Employer or if any relevant authorities responsible to the Employer are working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:</p> <p>(1) Frequency of the meetings: as and when considered necessary by Engineer.</p> <p>(2) Unless otherwise agreed, attendees shall include representatives of the Employer, Contractor and any other contractors and relevant authorities who may be employed in the execution of any work on or near the Site not included in the Contract</p> <p>(3) Agenda should relate to coordination among different contractors including for example:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any relevant authorities;</p> <p>(c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence;</p> <p>(d) Status of resolution of previous problems;</p> <p>(e) Items to be coordinated with police, fire department and other related organisations;</p> <p>(f) Compliance and registration requirements under the Laws of the Country;</p> <p>(g) Safety and health awards, media attention and the like; and</p> <p>(h) Other matters.</p> <p>1.30.4 Report on the Health and Safety Coordination Meetings:</p> <p>(1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p>
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<p>(b) Monthly or weekly schedule of important health and safety matters;</p> <p>(c) Accidents, fatalities, injuries in the previous month and measures to be taken to prevent any reoccurrence;</p> <p>NK: Are the phrases in red to be added? Ditto above Is the sequence here acceptable or shall it change as above?</p> <p>(d) Hazards, safety and health problems identified by any members of the Safety Committee;</p> <p>(e) Status of resolution of previous problems;</p> <p>(f) Items to be coordinated with police, fire department and other related organisations;</p> <p>(g) Compliance and registration requirements under the Laws of the Country; and</p> <p>(h) Safety and health awards, media attention and the like.</p> <p>1.28.2 Report on the Engineer's Regular Safety Meetings:</p> <p>(1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>(2) A copy of this report shall be submitted to the Contractor and Employer within seven (7) days after the meetings.</p> <p>(3) A further copy shall be included in the Engineer's Monthly Report submitted to the Employer.</p> <p>(4) The Contractor shall act immediately upon any oral instruction which is a consequence of the Contractor's failure to comply with his obligations under the Contract.</p> <p>(5) The Engineer shall issue a formal instruction for any variation requests.</p> <p>1.29 Project Safety Committee</p> <p>1.29.1 On larger Projects with multiple contract packages and contractors and unless otherwise stated in the Particular Safety Specification for those Projects, the Employer shall create a Project Safety Committee for the purpose of ensuring mutual understanding and effective implementation of health and safety management throughout the entire Project team.</p> <p>1.29.2 Unless otherwise agreed, the members of the Project Safety Committee shall include:</p> <p>(1) The Employer.</p> <p>(2) The Engineer(s).</p> <p>(3) The Contractor's Representative(s).</p> <p>(4) Health and Safety Officers of all members.</p> <p>1.29.3 The Chairman of the Safety Committee shall be the Employer.</p> <p>1.29.4 The Employer shall hold regular Project Safety Committee meetings, on a monthly basis unless otherwise agreed.</p> <p>NK: JICA commented to delete this as holding meetings are not monthly basis but optional.</p> <p><i>We propose "periodically as requested by the Employer" and ask you to reply to this comment as reply is not mentioned in the document with notes.</i></p>	<p>(2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.</p> <p>(3) A further copy shall be included in the Contractor's monthly progress report.</p> <p>1.31 Safety Statistics</p> <p>1.31.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.</p> <p>1.31.2 Actual statistics shall include the following:</p> <p>(1) Accident: description, casualties, location, time, type and cause.</p> <p>(2) Near-miss: description, location, time, type and cause.</p> <p>(3) Lost-time: lost hours of casualties, duration of discontinuation.</p> <p>(4) Total working hours for calculation of frequency rate, severity rate and annual incident rate.</p> <p>(5) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.</p> <p>(6) Number of health and safety staff.</p> <p>(7) Number of candidates given safety induction and other training.</p> <p>(8) Number of safety inspections,</p> <p>(9) Number of detections of non-compliant, unsafe or lack of Contractor's Equipment.</p> <p>(10) Number of instructions issued for failure to use PPE, or inadequate or ineffective PPE.</p> <p>(11) Number of Engineer's Instructions issued for work suspension.</p> <p>(12) Number of HSO instructions issued for work stoppage.</p> <p>(13) Others.</p> <p>1.31.3 All data shall be in a format and content given consent by the Engineer.</p>	<p>(2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.</p> <p>(3) A further copy shall be included in the Contractor's monthly progress report.</p> <p>1.31 Safety Statistics</p> <p>1.31.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.</p> <p>1.31.2 Actual statistics shall include the following:</p> <p>(1) Accident: description, casualties, location, time, type and cause.</p> <p>(2) Near-miss: description, location, time, type and cause.</p> <p>(3) Lost-time: lost hours of casualties, duration of discontinuation.</p> <p>(4) Total working hours for calculation of frequency rate, severity rate and annual incident rate.</p> <p>(5) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes.</p> <p>(6) Number of health and safety staff.</p> <p>(7) Number of candidates given safety induction and other training.</p> <p>(8) Number of safety inspections,</p> <p>(9) Number of detections of non-compliant, unsafe or lack of Contractor's Equipment.</p> <p>(10) Number of instructions issued for failure to use PPE, or inadequate or ineffective PPE.</p> <p>(11) Number of Engineer's Instructions issued for work suspension.</p> <p>(12) Number of HSO instructions issued for work stoppage.</p> <p>(13) Others.</p> <p>1.31.3 All data shall be in a format and content given consent by the Engineer.</p>
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<p>Please clarify what you want to be deleted. NK: Deletion is "on monthly basis".</p> <p>1.29.5 The Employer shall prepare a report summarising the concerns raised and conclusions of all items discussed at the Project Safety Committee Meeting. NK: JICA commented to replace "shall" with "may" in Clauses 1.29.3 to 1.29.5. We want to ask you to reply to this comment as reply is not mentioned in the document with notes.</p> <p>Please note that I have already edited the first paragraph to state "unless otherwise specified." With this change I think that no other change is necessary. NK: MD 氏の回答をご参照願います。</p> <p>1.30 Health and Safety Coordination with Other Contractors NK: We think that all of 1.30.1 and 1.30.2 below are requests to the Employer. We propose to move them to the User Guide.</p> <p>I disagree, this affects the Contractor also and it is important that it is stated here so that there is common and very clear legal agreement between Employer and Contractor on who does what. I think that this requires mention in both JSSS and the User Guide to avoid future dispute. Please also note my understanding that the User Guide is not a part of the Contract and please let me know if you require differently. NK: MD 氏の回答をご参照願います。</p> <p>1.30.1 Refer to GC 2.3 [Employer's Personnel] and GC 4.6 [Co-operation] regarding the respective obligations and requirements for the Contractor regarding cooperation with: (1) the Employer's Personnel, (2) any other contractors employed by the Employer, (3) the personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.</p> <p>In relation to the above, the Employer shall ensure that all of the above personnel and contractors co-operate with the Contractor's efforts and that they take actions similar to those that the Contractor is required to take under relevant parts of GC 4.8 [Safety Procedures] and GC 4.18 [Protection of the Environment].</p> <p>The Contractor shall provide sufficient information to the Employer who shall then ensure that all of the above personnel and contractors are fully informed of the Contractor's Safety Plan and that their personnel comply with the Contractor's Safety Plan.</p> <p>When preparing the Safety Plan, the Contractor shall identify the hazards and assess the risks of all aspects. To do this properly, information (including method statements, risk assessments and safety plans) may be needed from other contractors who will be working at the Site. The Employer shall therefore ensure that the Contractor is provided with all such other information as is requested by the Contractor necessary so that this can be incorporated into the Safety Plan. The Employer will also ensure that the Contractor is able to contact such other contractors and liaise with them on matters of health and safety.</p> <p>When risks arise because of potential interactions between the Contractor and other personnel or contractors (e.g. site transport matters) or a number of contractors are exposed to a common risk (e.g. from the site electrical distribution system), the Employer shall instruct these other contractors to</p>	<p>1.31.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.</p> <p>1.31.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.33 [Safety Reports].</p> <p>1.32 Health and Safety Records</p> <p>1.32.1 The Contractor shall keep health and safety records for the following: (1) Inspection records and checklists. (2) Meetings for safety and health management. (3) Monitoring of safety and health management activities. (4) Health and safety education and training for the Contractor's Personnel. (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country. (6) Work environment records and other records required by JSSS Chapter 2 [General Safety Measures] and other parts of JSSS. (7) Record of reports as may be required by government authorities. (8) Detection of non-compliant, unsafe or lack of Contractor's Equipment. (9) Instructions issued for unsafe behaviour or unsafe site conditions. (10) Instructions issued for failure to use PPE, or inadequate or ineffective PPE. (11) Engineer's Instructions issued for work suspension. (12) HSO instructions issued for work stoppage. (13) Others.</p> <p>1.32.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.32.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.33 [Safety Reports].</p> <p>1.33 Safety Reports</p> <p>1.33.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include: (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement. (2) Contractor/HSO and Joint Site Safety Inspection Reports. (3) Weekly Safety Report: summary of safety matters of the week. (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [Progress Reports].</p>	<p>1.31.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.</p> <p>1.31.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.33 [Safety Reports].</p> <p>1.32 Health and Safety Records</p> <p>1.32.1 The Contractor shall keep health and safety records for the following: (1) Inspection records and checklists. (2) Meetings for safety and health management. (3) Monitoring of safety and health management activities. (4) Health and safety education and training for the Contractor's Personnel. (5) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country. (6) Work environment records and other records required by JSSS Chapter 2 [General Safety Measures] and other parts of JSSS. (7) Record of reports as may be required by government authorities. (8) Detection of non-compliant, unsafe or lack of Contractor's Equipment. (9) Instructions issued for unsafe behaviour or unsafe site conditions. (10) Instructions issued for failure to use PPE, or inadequate or ineffective PPE. (11) Engineer's Instructions issued for work suspension. (12) HSO instructions issued for work stoppage. (13) Others.</p> <p>1.32.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.32.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.33 [Safety Reports].</p> <p>1.33 Safety Reports</p> <p>1.33.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include: (1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement. (2) Contractor/HSO and Joint Site Safety Inspection Reports. (3) Weekly Safety Report: summary of safety matters of the week. (4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [Progress Reports].</p>
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<p>adopt the same principles of risk prevention and control that are applied by the Contractor unless otherwise agreed.</p> <p>1.30.2 The Particular Safety Specification shall clearly describe any works for which the Employer is proposing to employ other contractors and any parts of the Site where the Employer's Personnel will be working together with a clear description of such works and the location, timing and other conditions for such works.</p> <p>1.30.3 If any other contractors are employed by the Employer or if any legally constituted public authorities responsible to the Employer is working on or near the Site of any work, the Engineer shall arrange and host Health and Safety Coordination Meetings:</p> <p>(1) Frequency of the meetings: as and when considered necessary by Engineer.</p> <p>(2) Unless otherwise agreed, attendees shall include representatives of:</p> <p>(a) The Employer;</p> <p>(b) The Contractor;</p> <p>(c) Other contractors employed by the Employer; and</p> <p>(d) Personnel of any legally constituted public authorities.</p> <p>NK: We considers it is easy to understand attendee by adding "who may be employed in the execution on or near the Site of any work not included in the Contract." to (d) though it mentioned in the first sentence.</p> <p>don't understand your comment, please advise what change you require (本Q&Aは無視願います。)</p> <p>(3) Agenda should relate to coordination among different contractors including for example:</p> <p>(a) Effectiveness of existing Safety Plans and suggestions for revision and improvement;</p> <p>(b) Issues, problems and response due to the mutual impact of the work of the Contractor, Employer's Personnel, the Employer's other contractors and the works of any legally constituted public authorities;</p> <p>(c) Accidents, injuries in the previous period and measures to be taken to prevent any reoccurrence;</p> <p>NK: Are the phrases in red to be added? See previous note</p> <p>(d) Status of resolution of previous problems;</p> <p>(e) Items to be coordinated with police, fire department and other related organisations;</p> <p>(f) Compliance and registration requirements under the Laws of the Country;</p> <p>(g) Safety and health awards, media attention and the like; and</p> <p>(h) Other matters.</p> <p>1.30.4 Report on the Health and Safety Coordination Meetings:</p> <p>(1) The Engineer shall prepare a report summarising the concerns raised and conclusions of all items listed in the agenda as above.</p> <p>(2) This report shall be submitted to the Employer, Contractor and other attendees within seven (7) days after the meeting.</p>	<p>1.34 Health and Safety Incentive Schemes</p> <p>1.34.1 The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the purpose of promoting workplace safety.</p> <p>1.34.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.</p> <p>1.34.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.</p> <p>1.34.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.</p> <p>1.34.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.</p> <p>1.34.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.</p> <p>1.34.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.</p> <p>1.34.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [Safety Reports].</p> <p>1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE</p> <p>1.35.1 Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's</p>	<p>1.34 Health and Safety Incentive Schemes</p> <p>1.34.1 The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the purpose of promoting workplace safety.</p> <p>1.34.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.</p> <p>1.34.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.</p> <p>1.34.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.</p> <p>1.34.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.</p> <p>1.34.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.</p> <p>1.34.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.</p> <p>1.34.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [Safety Reports].</p> <p>1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE</p> <p>1.35.1 Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's</p>
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<p>(3) A further copy shall be included in the Engineer's monthly progress report. (JC57)</p> <p>JC57: Engineer's monthly progress report is normally not shared with the Contractor. Delete "Engineer's" to mean Contractor's progress report.</p> <p>NK5/6: Will modify as commented.</p> <p>1.31 Safety Statistics</p> <p>1.31.1 The Contractor shall collect and compile statistical data for safety performance on the Works in order to permit monitoring of achievement and prevention of reoccurrence of accidents, near-misses and the like, therefore contributing to the improvement of safety on the Works.</p> <p>1.31.2 Actual statistics shall include the following:</p> <ol style="list-style-type: none"> (1) Accident: description, casualties, location, time, type and cause. (2) Near-miss: description, casualties, location, time, type and cause. (3) Lost-time: lost hours of casualties, duration of discontinuation. (4) Remedial measures taken. (5) Total working hours for calculation of frequency rate, severity rate and annual incident rate. (6) Number of users of the first aid station, number of people treated for disease/injury, description of disease/injury, causes. (7) Record of reports as may be required by government authorities. (8) Number of health and safety staff. (9) Number of Contractor's safety meetings and frequency. (10) Number of candidates given safety induction and other training. <p>NK: Are "candidates" replaced with "Contractor's Personnel"? No, they are all candidates for training and can include others e.g. Employer's Personnel and others, etc.</p> <ol style="list-style-type: none"> (11) Number of safety inspections. (12) Detection of non-compliant, unsafe or lack of Contractor's Equipment. (13) Instructions issued for unsafe behaviour or unsafe site conditions. (14) Instructions issued for failure to use PPE, or inadequate or ineffective PPE. (15) Engineer's Instructions issued for work suspension. (16) HSO instructions issued for work stoppage. (JC58) (17) Others. <p>JC58: Statistics and Records are mixed. 1 to 3 and 5 relate to statistics. 4 and 6 to 16 relate to records. It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32". By doing this, things will be streamlined: "statistics → records → their reporting"</p> <p>NK5/6: Will modify as commented.</p> <p>1.31.3 All data shall be in a format and content given consent by the Engineer.</p> <p>1.31.4 The statistical results shall be prepared and submitted in the Daily Safety Report to the Engineer for validation and mutual agreement.</p>	<p>Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.</p> <p>All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.</p> <p>1.35.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.</p> <p>If the HSO ascertains at any time that any items are not suitable for use, he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.</p> <p>1.35.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.</p> <p>If, as a result, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.</p> <p>1.35.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:</p> <ol style="list-style-type: none"> (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged. 	<p>Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.</p> <p>All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.</p> <p>1.35.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.</p> <p>If the HSO ascertains at any time that any items are not suitable for use, he shall immediately stop all use of that item, label the item as not being safe for use, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.</p> <p>1.35.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.</p> <p>If, as a result, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.</p> <p>1.35.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:</p> <ol style="list-style-type: none"> (1) New and up to date Personal Protective Equipment (PPE) and other safety equipment of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.
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コメントの追加 [岡本57]: **Engineer's monthly progress report is normally not shared with the Contractor. Delete "Engineer's" to mean Contractor's progress report.**

コメントの追加 [伊藤58]: **Statistics and Records are mixed.**

1 to 3 and 5 relate to statistics. 4 and 6 to 16 relate to records.

It must be better to merge 1.31 and 33 and, inside of the "new 1.31", describe statistics and records separately. Alternatively, simply change order between 1.32 and 1.33, and all about records are to be included in the new "1.32".

By doing this, things will be streamlined: "statistics → records → their reporting"

<p>1.31.5 The data shall subsequently be compiled and included in the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].</p> <p>1.32 Safety Reports</p> <p>1.32.1 The Contractor shall provide regular safety reports to the Engineer to keep him fully informed of compliance with the Safety Plan and all matters of health and safety. Reports shall include:</p> <p>(1) Daily Safety Report: number of workers at site, works in progress (outline), near-misses/incidents/accidents, safety findings, actions taken, for improvement.</p> <p>NK Is it necessary to add "for"? Yes, it can be</p> <p>(2) Contractor/HSO and Joint Site Safety Inspections.(JC59)</p> <p>JC59:Joint Site Safety Inspection Report ? NK5/6: Will modify as commented.</p> <p>(3) Weekly Safety Report: summary of safety matters of the week.</p> <p>(4) Monthly Safety Report: summary of safety matters for the month, monthly and cumulative safety statistics. The Monthly Safety Report shall be submitted as an attachment to the Contractor's monthly progress report, required by GC 4.21 [Progress Reports].</p> <p>1.33 Health and Safety Records</p> <p>1.33.1 The Contractor shall keep health and safety records for the following:</p> <p>(1) Accidents, fatalities, near-misses.</p> <p>(2) Inspection records and checklists.</p> <p>(3) Meetings for safety and health management.</p> <p>(4) Monitoring of safety and health management activities.</p> <p>(5) Health and safety education and training for the Contractor's Personnel.</p> <p>(6) Health management for the Contractor's Personnel, documents regarding workers' health conditions (such as medical history and medical examination results) shall be stored in compliance with the Laws of the Country.</p> <p>(7) Work environment records and other records required by JSSS Chapter 2 [General Safety Measures] and other parts of JSSS.</p>	<p>(2) New or up to date Contractor's Equipment and Temporary Works, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works.</p>	<p>(2) New or up to date Contractor's Equipment and Temporary Works, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works.</p>
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コメントの追加 [伊藤59]:Joint Site Safety Inspection Report ?

<p>1.33.2 All records shall be in a format and content given consent by the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.33.3 A summary of the above records shall be submitted to the Engineer as a part of the Contractor's Monthly Safety Report to be submitted under JSSS 1.32 [Safety Reports].</p> <p>1.34 Health and Safety Incentive Schemes</p> <p>1.34.1 The Contractor shall consistently enforce work rules (whether or not an injury or illness is reported) to demonstrate his commitment to creating a culture of safety, not just the appearance of reducing rates. Action should not be taken to penalise any worker for reporting a work-related injury or illness rather than for the legitimate purpose of promoting workplace safety and health.</p> <p>NK: May we know if the word of "legitimate" (conforming to the law or to rules) is necessary?(対応済み)</p> <p><i>We consider the work rules may include the Contractor determines by himself such as 5S activity in addition of requirements by the Law and JSSS.</i></p> <p>Deleted see above.</p> <p>1.34.2 It is considered that incentive schemes are an important tool to promote an improvement in workplace health and safety and the Contractor is therefore required to develop and implement such health and safety incentive schemes.</p> <p>1.34.3 It is suggested that workers should be rewarded for reporting near-misses or hazards, as this promotes worker involvement in the health and safety management process.</p> <p>1.34.4 Consideration should also be given to rate-based incentive schemes which concentrate on reducing the number of reported injuries and illnesses by rewarding workers with certification and/or prizes or bonuses at the end of an injury-free period and which also could reward Operation Leaders or managers based on the lack of injuries within their respective teams.</p> <p>1.34.5 Any scheme must however be implemented in such a manner that it does not discourage reporting by workers, such as taking negative action against a worker by withholding a prize or bonus because of a reported injury.</p> <p>1.34.6 The Contractor shall introduce adequate precautions to ensure that workers feel free to report an injury or illness.</p> <p>1.34.7 As an alternative to rate-based achievement schemes, incentive schemes that take positive steps to emphasise safety, not just incident rates are often useful such as schemes that reward workers for identifying potentially unsafe, dangerous or hazardous conditions on the Site.</p> <p>1.34.8 The Contractor shall describe the proposed health and safety incentive scheme in the Safety Plan and shall also inform the Employer and Engineer about the progress and achievement of such schemes through their Monthly Safety Report submitted under JSSS 1.32 [Safety Reports].</p> <p>1.35 Contractor's Equipment, Temporary Works, Safety Equipment and PPE</p> <p>1.35.1 Contractor's Equipment, Temporary Works, Safety Equipment and PPE to be used upon the Works, (for example electrical systems, welding and cutting equipment, scaffolding, system Formwork and Falsework, etc.) together with all components, systems, materials and equipment, safety equipment and PPE (referred to collectively in this clause as Contractor's</p>	<p>1.36 Health Matters</p> <p>1.36.1 The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.</p> <p>1.36.2 Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall be made available free of charge for the use of the Contractor's Personnel, the Employer's Personnel all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such healthcare services and facilities shall also be made available free of charge for the family members of the aforementioned personnel/persons.</p> <p>1.36.3 Occupational health care shall be provided by the Contractor and shall include:</p> <ol style="list-style-type: none"> (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]). (2) Occupational health care including noise, frequent or excessive use of vibrating tools. (3) Avoiding frequent or excessive manual handling of loads, stress and fatigue. 	<p>1.36 Health Matters</p> <p>1.36.1 The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.</p> <p>1.36.2 Healthcare services and facilities at the Site shall be made available free of charge. If so specified in the Particular Safety Specification, such healthcare services and facilities shall also be made available free of charge for the family members of the aforementioned personnel/persons.</p> <p>1.36.3 Occupational health care shall be provided by the Contractor and shall include:</p> <ol style="list-style-type: none"> (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [Working Environment]). (2) Occupational health care including noise, frequent or excessive use of vibrating tools. (3) Avoiding frequent or excessive manual handling of loads, stress and fatigue.
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コメントの追加 [SS91]: The 1.24.2 and 1.36.2 are almost same provisions. Can we specify 1.36.2 referring to 1.36.2?

コメントの追加 [MJD2R91]: Please leave as is

<p>Equipment and Temporary Works), shall be suitable and fit for the purpose for which they are intended.</p> <p>All shall be used in full accordance with the manufacturer's printed instructions or accepted industry practice and shall be used, stored, handled, assembled, erected, installed, maintained and dismantled by qualified, skilled, specially trained and experienced personnel.</p> <p>1.35.2 The Contractor shall ensure that all items of Contractor's Equipment and Temporary Works for use upon the Works are inspected by the HSO his delegated and technically qualified assistant (JC60) at the required location before the commencement of any operation or use and regularly inspected thereafter to ensure continued compliance with the foregoing. Following any such inspection, all tested items shall be labelled by the Contractor with clear, durable and weatherproof labels confirming the last/current date of inspection, date of next inspection and signed by the HSO, thereby certifying the items as being safe for use.</p> <p>NK: As we commented in 1.12.3, the inspection shall be made by the designated personnel for check by the Contractor and the HSO shall monitor the inspection system.</p> <p>We want to ask you to modify the 1.35.2 as the above.</p> <p>As already discussed and explained it is not necessary to state this here or elsewhere. Please refer to earlier notes and also to JSSS 1.12.3 [Supporting Staff] where this is explained.</p> <p>I do not recommend your suggested change.</p> <p>JC60: Agree with MD</p> <p>NK5/6: Will modify as commented.</p> <p>If the HSO ascertains at any time that any items are suitable for such certification he shall immediately stop all use of that item, label the item as <u>not being safe for use</u>, stop all work for which that item and any associated items is being used and cease any such work until the situation is corrected by repair, re-testing and certifying. Similarly, the Engineer may issue instructions to stop all use of any item and stop all work for which that item and any associated items is used when it is discovered that the certification is not available or is not currently valid.</p> <p>1.35.3 The Engineer may also instruct that any Contractor's Equipment and Temporary Works shall be subjected to examination, inspection, measurement or testing, by the Contractor at the expense of the Contractor. <u>The Contractor shall submit the report of such examination, inspection, measurement or testing to the Engineer.</u></p> <p>If, as a result of such examination, inspection, measurement or testing, any such Contractor's Equipment and Temporary Works is found to be defective, or otherwise not in accordance with JSSS or the Contract, the Engineer may reject such Contractor's Equipment and Temporary Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure by repair as necessary and re-testing that the rejected item(s) complies with the Contract.</p> <p>1.35.4 As confirmed in Form JSSS/BSD Bidder's Safety Declaration (refer to JSSS Annex 1.3 [Additional Contractor Forms]), the Contractor shall mobilise for use upon the Works:</p> <p>(1) New and up to date Personal Protective Equipment (PPE) and <u>other safety equipment and Temporary Works (JC61)</u> of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet</p>	<p>(4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability.</p> <p>1.36.4 The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:</p> <p>(1) Health care staff to be assigned at the Site.</p> <p>(2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.</p> <p>(3) Healthcare services to be provided including lectures and education on health matters.</p> <p>(4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.</p> <p>(5) Occupational healthcare proposal.</p> <p>(6) Temporary water and power supply to maintain use during mains supply failure.</p> <p>1.36.5 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare services and facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect <u>all relevant personnel</u>.</p> <p>1.36.6 Report of Serious Illness</p> <p>(1) The Contractor shall inform the Engineer and submit details of any serious illness.</p> <p>(2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.</p> <p>(3) The report shall include details of the HSO's recommended counter-measures.</p> <p>(4) The Engineer is to be consulted on the types of illness for which reports are to be informed.</p> <p>1.37 Design and Management of Temporary Works</p> <p>1.37.1 Unless otherwise specified in the Particular Safety Specification, the Contractor is required to comply with <u>BS5975: Code of Practice for</u></p>	<p>(4) Fitness to work examinations, including eyesight, hearing and physical mobility and capability.</p> <p>1.36.4 The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:</p> <p>(1) Health care staff to be assigned at the Site.</p> <p>(2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas.</p> <p>(3) Healthcare services to be provided including lectures and education on health matters.</p> <p>(4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables.</p> <p>(5) Occupational healthcare proposal.</p> <p>(6) Temporary water and power supply to maintain use during mains supply failure.</p> <p>1.36.5 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare services and facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect <u>all relevant personnel</u>.</p> <p>1.36.6 Report of Serious Illness</p> <p>(1) The Contractor shall inform the Engineer and submit details of any serious illness.</p> <p>(2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.</p> <p>(3) The report shall include details of the HSO's recommended counter-measures.</p> <p>(4) The Engineer is to be consulted on the types of illness for which reports are to be informed.</p> <p>1.37 Design and Management of Temporary Works</p> <p>1.37.1 Unless otherwise specified in the Particular Safety Specification, the Contractor is required to comply with <u>the management standard with</u></p>
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コメントの追加【伊藤60】: Agree with MD

コメントの追加【岡本61】: Temporary Works is covered in (2)

<p>with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged.</p> <p>JC61: Temporary Works is covered in (2). NK5/6: Will modify as commented.</p> <p>(2) New or recent Contractor's Equipment and Temporary Works, not more than five (5) years old upon the date that it is mobilised to the site, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; and that all of the above will be used correctly and for the purpose intended.</p> <p>Contractor's Equipment and Temporary Works shall be pre-inspected at origin at the expense of the Contractor before shipment before delivering the Site (JC62) by an independent testing, inspection and certification agency to ensure compliance with the foregoing paragraph subject to receiving the consent of the Engineer.</p> <p>NK: We considers in actual basis as follows:</p> <p>Q1: Is Scaffoldings classified in (1) TW? If so, no need to discuss the inspection of Scaffoldings before shipment? Shall Scaffoldings be new or up to date? If not, they shall be not more than 5 years old as specified in (2)?</p> <p>Steel and system scaffolding etc. is considered as Contractor's Equipment but other types may be TW. This is also not covered by Chapter 4 of your draft. I have defined this is 1.35.1 and as it is an important item for which there should be no future argument.</p> <p>Q2: Does the Temporary Works in (2) mean Earthwork Support, Scaffoldings, etc? We think the Temporary Works are constructed at the Site. If so, (2) can be considered as materials of TW shall not more than 5 years old. We already specify materials of TW in Chapter 4 TW.</p> <p>Yes, see it includes all of these and yes much will be constructed or assembled at the Site but some major components (e.g. steel sheet piling, anchors, support systems and other components and materials) may be imported in which case this applies. Please refer also to definition in 1.35.1.</p> <p>Can we delete "and Temporary Works" in (2)?</p> <p>do not recommend it.</p> <p>Q3: The Contractor's Equipment discussed to be inspected at origin in the last meeting were concrete plant you explained and tunnel boring machine Mr Date did. They are mainly related with work progress when they are old.</p> <p>This is not my recollection although it was mentioned as examples and my explanation covered all types of Contractor's Equipment.</p> <p>We consider old trucks, dump trucks, cranes, etc. causes serious accident due to poor maintenance. The local contractors/subcontractors and rental companies own old construction equipment including cranes, pile driving machines, etc. which caused serious accident, too.</p> <p>If the equipment is not more than 5 years, I think not necessary to make pre-inspection at origin.</p> <p>If you don't want pre-inspection at origin that is of course your choice. How to ascertain that it is compliant if there is no pre-inspection? It is too late when it arrives on site. I have given my suggestion and repeatedly explained this.</p> <p>If JICA do not what this to apply, please let me have your instructions on what shall be changed and how.</p> <p>We propose to delete the 2nd sentence above.</p> <p>do not agree for above reason but respect your wish. Just delete it.</p>	<p>Temporary Works Procedures and the Permissible Stress Design of Falsework.</p> <p>1.37.2 An alternative standard is acceptable by reference to JSSS 1.4.1 [Specified Standards and Regulations] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works.</p> <p>1.37.3 It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.</p> <p>1.37.4 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.</p> <p>1.37.5 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.</p>	<p>respect to design, erection, use and dismantling of Temporary Works provided in Section 1 and Section 2 of BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework.</p> <p>1.37.2 An alternative standard is acceptable by reference to JSSS 1.4.1 [Specified Standards and Regulations] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works.</p> <p>1.37.3 It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.</p> <p>1.37.4 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.</p> <p>1.37.5 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.</p>
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コメントの追加 [SS93]: JICA requested to add the phrase in red in their last comments and MD has no comment.

Please add them as commented.

コメントの追加 [MJD94R93]: Please do not change, this is explained in my email

コメントの追加 [伊藤62]: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant?

<p>In stead of 2nd sentence, we propose to specify the inspection of Contractor's Equipment as specified in Chapter 4 below, "The Contractor shall submit the inspection sheets of Contractor's Equipment at the time of its mobilization to receive the consent to the Contractor's Equipment by the Engineer."</p> <p>JSSS 4.4 INSPECTION, MAINTENANCE AND REPAIR, 4.4.1 Requirements Generally, (3) Inspection at the time when Contractor's Equipment is mobilised to the Site "In relation with the above, it should be noted that Contractor's Equipment shall be in a working and safe condition and fully compliant with the Contract when it is mobilised to the Site and other than initial assembly and set up, no repair or maintenance is expected. The Engineer may refuse to accept delivery to the Site of any Contractor's Equipment that is not in this condition."</p> <p>There is no reason why anything should be added here and do not suggest that this is added as it is unnecessary duplication.</p> <p>Q4: We found regulations of cars in countries by internet. They limit vehicles not more than such old as 3, 5, 8 and 15 years. The regulation of import of second hand machinery and facility in Vietnam is that they shall be not more than 10 years old.</p> <p>The above mentioned 5 years old equipment seems short for recent construction equipment. We wonder 10 years old seem reasonable. How do you think 10 years old?</p> <p>JICA are paying market bid rates for the best most productive and safest equipment, why should this be compromised? I have already given my explanations and recommendation, please let me have your instructions on what this shall be changed to or if it shall be deleted.</p> <p>Many contractors will definitely not like this age imposition because it is regularly abused in the pursuit of profit.</p> <p>JC62: Equipment and TW may be domestically procured. So, "shipment" may not cover domestically procured ones. "before delivering the Site" may be more relevant.</p> <p>NK5/6: Will modify as commented.</p> <p>1.36 Health Matters</p> <p>1.36.1 The Contractor is reminded of his obligations under GC 6.7 [Health and Safety] to take all reasonable precautions, at all times to maintain the health of the Contractor's Personnel and ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. Under other clauses of the Contract, the Contractor is required to protect the Contractor's Personnel from insect and pest nuisance, and to take other measures to reduce danger to their health.</p> <p>1.36.2 Healthcare services and facilities at the Site shall be made available free of charge, to or for the use of the Contractor's Personnel, the Employer's Personnel and all other persons who are entitled to be on the Site. If so specified in the Particular Safety Specification, such healthcare services shall also be made available for free of charge for the family members of the aforementioned personnel/persons. (JC63)</p> <p>JC63: Same comment as 1.24</p> <p>NK5/6: Will modify as commented.</p> <p>1.36.1.36.3 Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site. (JC64)</p> <p>JC64: See 1.2.2 (6).</p> <p>NK5/6: Will modify as commented.</p>	<p>1.37.6 Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.</p> <p>The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [Contractor's Method Statements]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.</p> <p>The Engineer may review Temporary Works design for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 or any other acceptable standard in accordance with JSSS 1.37.2.</p>	<p>1.37.6 Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.</p> <p>The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [Contractor's Method Statements]. If the Engineer chooses to review same, this shall not be construed as a check or validation of the Contractor's design or methods.</p> <p>The Engineer may review Temporary Works design for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 or any other acceptable standard in accordance with JSSS 1.37.2.</p>
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コメントの追加【伊藤63】: Same comment as 1.24

コメントの追加【伊藤64】: See 1.2.2 (6)

<p>1.36.3<u>1.36.4</u> Occupational health care shall be provided by the Contractor and shall include for example:</p> <ol style="list-style-type: none"> (1) Environmental health care with consideration and precautions against asbestos, dust, lead and other metals, gases, hazardous and toxic chemicals, sunlight, engine exhaust emissions, (refer also to JSSS 2.1 [<i>Working Environment</i>]). (2) Occupational health care including noise, frequent or excessive use of vibrating tools. (3) <u>Avoiding (JC65)</u> Frequent or excessive manual handling of loads, stress and fatigue. 		
<p>JC65: <u>Better to add ???</u> NK5/6: Will modify as commented.</p> <ol style="list-style-type: none"> (4) <u>Fitness to work examinations, including eyesight, hearing and physical mobility and capability (JC66)</u> 		
<p>JC66: <u>Is this health care service?</u> NK5/6: Will modify as commented.</p> <p>1.36.3<u>1.36.5</u> The Contractor shall prepare a Health Care Plan as a part of the Safety Plan including, descriptions and where necessary details or quantities of:</p> <ol style="list-style-type: none"> (1) Health care staff to be assigned at the Site. (2) Provision of anti-mosquito measures including nets, medications or inoculations and the like in malarial prone areas. (3) Healthcare services to be provided including lectures and education on health matters. (4) Healthcare treatment facilities and medicines on the Site together with description of equipment and consumables. (5) Occupational <u>H-H</u> healthcare proposal. (6) Temporary water and power supply to maintain use during mains supply failure. (7) Type of communication facilities and measures for <u>emergency response</u>. <p>NK: May we know example of emergency response? <u>Please let me know what facilities you require and I will edit.</u> NK: We will further consider it.</p> <p>1.36.4 <u>Unless otherwise specified in the Particular Safety Specification, healthcare services and facilities at the Site shall also be made available free of charge, to or for the use of any accompanying family members of the Contractor's Personnel, the Employer's Personnel and the family members of all other persons who are entitled to be on the Site.</u></p> <p><u>1.36.6</u> <u>Where the Site is located at an excessive distance from urban areas and/or where there is a lack of immediate availability of healthcare facilities, or where local health authorities do not exist or are lacking in capability or standard of care, or where so required by the nature of the Works, the Contractor shall be responsible for providing additional healthcare services and facilities at the Site to comply with his obligations as specified in the Particular Safety Specification and as are necessary to fully protect to comply with his obligations under the Contract and as are necessary to fully protect all Contractor's Personnel and Employer's Personnel and all other persons who are entitled to be on the Site (JC67)</u></p>	<p>1.37.7 For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [<i>Inspection and Monitoring of Temporary Works</i>].</p> <p>1.37.8 Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate.</p>	<p>1.37.7 For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [<i>Inspection and Monitoring of Temporary Works</i>].</p> <p>1.37.8 Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate.</p>

コメントの追加【伊藤65】: Better to add ???

コメントの追加【伊藤66】: Is this health care service?

コメントの追加【伊藤67】: See 1.2.2 (6)

<p>JC67: See 1.2.2 (6). NK5/6: Will modify as commented. 1.36.51.36.7 Report of Serious Illness</p> <p>(1) The Contractor shall inform the Engineer and submit details of any serious illness.</p> <p>NK: Does the serious illness mean occupational illness, infectious disease, mosquito born illness, etc.?</p> <p>It is up to you. Under GCC 6.7 The Contractor is required to maintain records and make reports concerning health matters to the Engineer as the Engineer may reasonably require. This is a further suggestion to try to reduce the volume and contents of report to be prepared. Please see (4) following, the above can be omitted if required.</p> <p>(2) Having investigated and established the cause of any serious illness, the Contractor shall report the detail and conclusion of the investigation as soon as practicable to the Engineer.</p> <p>(3) The report shall include details of the HSO's recommended counter-measures.</p> <p>NK: Is "HSO" replaced with Contractor as same as (2) above? No. I do not recommend this. Please refer to the previous notes on this subject, the Contractor may send it but the Health and Safety Officer will prepare it.</p> <p>(4) The Engineer is to be consulted on the types of illness for which reports are to be informed.</p> <p>1.37 Design and Management of Temporary Works</p> <p>1.37.1 Unless otherwise specified in the Particular Safety Specification, the Contractor is required to comply with the management standard with respect to design, erection, use and dismantling of Temporary Works provided in Section 1 and Section 2 of BS5975: Code of Practice for Temporary Works Procedures and the Permissible Stress Design of Falsework (JC68).</p>	<p>Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties.</p> <p>1.38 Unexploded Ordnance (UXO)</p>	<p>Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties.</p> <p>1.38 Unexploded Ordnance (UXO)</p>
<p>Changed already. JC68: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2. NK5/6: Will modify as commented.</p> <p>1.37.2 An alternative standard is acceptable by reference to JSSS 1.4.1 [Specified Standards and Regulations] providing that the proposed alternative also contains equivalent or higher standards for the management of Temporary Works including Class A Falsework (JC69).</p> <p>NK: Is "Class A Falsework" instead of "Falsework" which JICA drafted specified specially referring to the following BS5975?</p> <p>Section 1, General Scope "This guidance is also applicable to the design of what is termed class A falsework 1) in BS EN 12812:2004, the design of which is for example specifically excluded from BS EN 12812:2004"</p> <p>Please also refer to BS 5975, Foreword, page VII, penultimate paragraph. The European standard on falsework, BS EN 12812, exists in parallel with this British Standard. It specifies performance requirements for the design of falsework in accordance with one of three classes: A, B1 and B2. Limit state design methods are specified for design classes B1 and B2. It does not provide guidance for the structural design of Class A. It is recommended that Section 3 is used to provide guidance for Class A falsework.</p> <p>It appears to follow that BS EN 12812 is not necessarily an acceptable alternative for example because Class A is excluded. I have assume therefore that it is necessary to state the need for Class A Falsework. Please be aware that I have not reviewed or studied the BS in detail so please do not assume</p>	<p>1.38.1 If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.</p> <p>1.38.2 Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.</p> <p>1.38.3 Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.</p> <p>1.38.4 Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.</p>	<p>1.38.1 If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.</p> <p>1.38.2 Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.</p> <p>1.38.3 Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.</p> <p>1.38.4 Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.</p>

コメントの追加 [岡本68]: It is not always easy to follow BS5975's requirements with respect to design standard, while BS5975 is good as for procedures. So better to mention Section 1 & 2.

<p>that I have. I do recommend that it is studied by JICA and NK to ascertain that it is applicable.</p> <p>Previous clause 1.34.3 regarding alternatives is not now required as I have drafted and included JSSS 1.4.1 [Specified Standards and Regulations] to cover this generally.</p> <p>Previous clause 1.34.6 has already been deleted.</p> <p>There is no need for the suggested insertion into the following clause (previous Clause 1.34.7) as per the san's comment.</p> <p>JC69: delete it?</p> <p>NK5/6: Will delete as commented because the sentence is for the management of Temporary Works, so Class A Falsework; one of TWs, is not needed to be specially mentioned.</p> <p>1.37.3 It is to be noted that BS5975 constitutes guidance and recommendations and it is not quoted herein as if it constitutes a specification or an integral part of JSSS. The Contractor shall however justify in writing any course of action that deviates from the recommendations of BS5975 and shall submit such justification to the Engineer for his information and consent.</p> <p>1.37.4 It is to be noted that certain design standards included or referred to in the BS (for example wind loadings), are restricted to use in the United Kingdom, in which case the Contractor shall be assumed to have adopted the design standards applicable in the Country of the Works.</p> <p>1.37.5 The Contractor shall prepare and implement suitable procedures whereby all Temporary Works staff during the course of their work and on completion shall prepare and sign formal records of all Temporary Works under their management and control, thereby certifying that all has been performed, completed and validated in accordance with BS5975. All such records shall be in a format and content subject to the consent of the Engineer and all shall be made available for inspection by the Engineer.</p> <p>1.37.6 Procedures for the appointment and any replacement of the senior Temporary Works coordination, design or supervision staff shall be the same as described for the HSO in JSSS 1.12 [Health and Safety Officer at the Site (HSO)].</p> <p>JC: JICA commented as follows:</p> <p><i>Issue 6 1.34.8 Too much to require the Contractor name all the specialist staff at the Bid stage. It is also excessive to require consent of the Engineer for those specialist staff.</i></p> <p><i>"Necessary qualification" can be combined with 1.34.12 or 1.34.13.</i></p> <p><i>Issue 6 1.34.9 If comply with JSSS1.9, all the specialist staff shall be appointed before the commencement, and subject to the Engineer's consent.</i></p> <p>NK: From this comment, the 1.37.12 below is enough requirement. 1.37.6 above specifies to refer to 1.12, which 1.12 is for HSO, it seems difficult to apply for personnel of TW.</p> <p><i>As 1.3.12 specifies requirement and necessity of consent of the Engineer, we propose to delete 1.37.6.</i></p> <p>understand your comment and have no objection to the deletion of 1.37.6</p> <p>1.37.7 Without affecting the Contractor's responsibilities for design of the Temporary Works, the Engineer shall cooperate with the Contractor's Temporary Works staff and shall provide pertinent information about the design of the Permanent Works which may be of relevance and assistance to the Contractor with the Temporary Works design.</p> <p>The Contractor shall submit Method Statements for any parts of the Temporary Works (including designs and calculations of Falseworks) as may be requested by the Engineer for his review in accordance with JSSS 1.9 [Contractor's Method Statements]. If the Engineer chooses to review</p>	<p>1.38.5 Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy if the further clearance certificate together with any further instructions from the Engineer.</p>	<p>1.38.5 Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy if the further clearance certificate together with any further instructions from the Engineer.</p>
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<p>same, this shall not be construed as a check or validation of the Contractor's design or methods.</p> <p>The Engineer may have no obligation under the Contract to review Temporary Works design, however he may choose to do so for those parts which he considers to be of vital importance for safety. The Contractor shall cooperate and work with the Engineer on this task to demonstrate that the Contractor has systems in place to ensure compliance with BS 5975 or any other acceptable standard in accordance with JSSS 1.37.2. The Engineer shall have no obligation to issue any response or comment, however, if he chooses to do so, any such response or comment shall be deemed to be provided in good faith, shall be treated accordingly under GC 3.1 [Engineer's Duties and Authority] Sub-clause (c) and issued without prejudice to the Contractor's overriding responsibility for the safety and adequacy of the Temporary Works.</p> <p>I have given further thought to the following clause which was originally considered as an exception. I am now of the opinion that offering such alternative to an Employer to state his requirements in the PSSS is not a good idea as it may result have a negative effect.</p> <p>Most JICA funded projects are large projects and will have a Temporary Works content. I suggest that the following alternative clause should be deleted to make these important requirements very clear:</p> <p>If there is only a small and simple TW content, even if the BS 5975 is applied it will not cause any major harm or cost.</p> <p>The sample specification provided some time back by JICA for the Hong Kong Project showed that all work shall comply with the BS. (JC70).</p> <p>NK:MD 氏は上記の理由で次の 1.37.8 の条項は不要であると考え削除を提案しています。ご検討をお願いします。</p> <p>JC70: Understand. But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?</p> <p>NK5/6: Will modify as commented.</p> <p>1.37.8 Where the Particular Safety Specification does not specifically require the Contractor to comply with BS5975, the Contractor shall in any event demonstrate by description in the Safety Plan and his actions that he has effective arrangements in place for controlling risks arising from the design, selection of materials, components and equipment, use, management, dismantling and removal of Temporary Works including for example, by ensuring the following:</p> <ol style="list-style-type: none"> (1) Appointment of appropriately qualified and experienced staff. (2) Preparation of adequate Temporary Works designs. (3) Independent internal or external checking of the Temporary Works Design. (4) Preparation of a Temporary Works register and records (5) Pre-erection inspection of all Temporary Works, including materials, components and equipment. (6) Control and supervision of the Temporary Works erection, safe use, maintenance and dismantling of the Temporary Works, including procedures to: <ol style="list-style-type: none"> (a) Check that the Temporary Works have been erected in accordance with the design and issue by the HSO Contractor of a suitable sign showing it as complete and safe to use; and (b) Confirm when the Permanent Works have attained adequate strength to allow dismantling of the Temporary Works and 		
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コメントの追加【伊藤69】: Understand.
 But, could you transfer 1.37.8 to User Guide for guidance for small project (including grant aid projects)?

<p>issue by the HSO Contractor of a suitable sign showing that it is ready for dismantling.</p> <p>NK: As mentioned HSO will inspect the execution of Safety Program by designated personnel and safety conditions at the site in another clause, we consider HSO will be replaced with Contractor as JICA commented: Should it be HSO? When BS5975 applies. TWCTWS are expected to issue a permit (See 11.2.3 and 11.3.3 of BS5975). So, not necessarily HSO?</p> <p>The above applies when BS 5975 doesn't therefore I suggest (subject to JICA and NK agreement) that this can be deleted.</p> <p>However, yes, the Temporary Works staff are all involved to make sure that the Temporary Works are designed and executed correctly, however the HSO is ultimately responsible for ALL safety on the Works and nothing should avoid his overview. I recommend that this should remain as HSO. I believe that it is a correct requirement which in practice should not be more than a counter signature.</p> <p>1.37.9 In accordance with JSSS 1.18 [Proper Placement of Contractor's Personnel], the Contractor shall ensure that the design, erection, maintenance, dismantling and removal of Temporary Works, are all carried out by competent and experienced persons and in a controlled and closely supervised manner.</p> <p>NK: We feel this is Method Statement as it mentions the measures and 1.3.10 refers to MT. How do you think?</p> <p>I understand and agree with your comment. However, JSSS 1.18 gives rules for the proper placement of Contractor's Personnel and it probably better therefore to rephrase this as above.</p> <p>The following clause can be deleted.</p> <p>1.37.10 For further information on Method Statements refer to JSSS 1.9 [Contractor's Method Statements].</p> <p>1.37.11 For further information on monitoring the performance of Temporary Works, refer to JSSS 6.1.3. [Inspection and Monitoring of Temporary Works].</p> <p>1.37.12 Irrespective of any legal requirement under the Laws of the Country, all of the Contractor's Temporary Works specialist staff shall have appropriate academic, educational or vocational qualification for Temporary Works coordination, design or supervision as appropriate. Such staff shall also have work experience in construction and in Temporary Works design or supervision as appropriate. The Contractor shall ascertain for himself that all such staff are qualified to perform their duties. and shall obtain the consent of the Engineer.</p> <p>NK: We think 1.3.12 is too long sentence to clearly understand requirement. Yes I agree and have reworded this as above.</p> <p>Q-1 Is consent by the Engineer given to specialist staff?</p> <p>This part can be deleted.</p> <p>Q-2 Is it not necessary to mention about staff of subcontractor as the Contractor includes subcontractor?</p> <p>We propose to divide the sentence to two requirement sentences: 1) qualification, etc. and 2) application and consent by the Engineer.</p> <p>I have reworded all, please refer to the above.</p> <p>1.38 User Training User Training (JC71) JC71: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important. NK5/6: Will delete as commented.</p> <p>1.39 Unexploded Ordinance (UXO) NK: we considers JICA may not specify 1.38 in detail as the minutes of meeting below:</p>		
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コメントの追加 [岡本70]: We think JSSS should stay in the range of safety during construction although safe use of constructed infrastructure is also important.

- 1.40—MM: This section will be left in the next draft and perhaps deleted in the final draft.
- 1.41—NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.
- ~~1.42— I recommend that it be included here as a default requirement.~~
- 1.43— Unless otherwise specified in the Particular Safety Specification and prior to issuance of the Taking Over Certificate for the Works or any parts or Sections thereof, the Contractor shall provide User Training for the Employer's Personnel including all users, operational and maintenance staff to ensure that they are fully able and qualified to safely use, operate, repair and maintain all the Works and all Plant provided under the Contract.
- 1.44— The Works or any parts or Sections thereof shall not be considered to be complete for the purposes of taking over until User Training for that part or Section has been completed and so certified as such by the Engineer.
- 1.45— User Training shall vary according to the scope of the Works however it shall generally cover the following:
- 1.46— Safe system and Plant use, operation and process control.
- 1.47— System and Plant maintenance and repair, including identifying, ordering, stocking, auditing, draw down and issue of spare parts and equipment replacements
- 1.48— Training in use of all hardware and software packages.
- 1.49— Laboratory control (sampling and analysis) including operation of laboratory equipment.
- 1.50— Recording and reporting.
- 1.51— Emergency operation procedure.
- 1.52— Maintenance management procedures.
- 1.53— Inventory and store control systems.
- 1.54— Particular safety procedures, including:
- 1.55— Safe working procedure;
- 1.56— Housekeeping of the facilities;
- 1.57— Identification of accident prone, dangerous or hazardous conditions, locations or operations; and
- 1.58— Safety measures for the Works and all items of Plant.
- 1.59— Any changes to the above with further particular details of User Training shall be provided in the Particular Safety Specification.
- 1.60— The Contractor shall also be responsible for training some candidates (as selected by the Employer and accepted by the Contractor) to be future trainers, so that when qualified by the Contractor such trainers will be able to train future candidates to use, operate, repair and maintain the Works and all Plant provided under the Contract.
- 1.61— Other requirements for User Training—
- 1.62— The Contractor shall not be responsible for paying expenses or salaries of candidates attending the User Training.

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- ~~1.63—User Training shall be on Site in the completed facilities, unless otherwise specified in the Particular Safety Specification.~~
- ~~1.64—The Contractor shall ensure that all instructors are appropriately qualified, skilled and experienced and competent for the purpose and consented to by the Engineer.~~
- ~~1.65—The Engineer may choose to send representatives to witness the training.~~
- ~~1.66—The number of Employer's staff to be trained shall be provided in the Particular Safety Specification.~~
- ~~1.67—Unless otherwise specified in the Particular Safety Specification, all training shall be conducted in the language of the Country.~~
- ~~1.68—The Contractor shall prepare a comprehensive training programme for each part or Section of the Works and for all Plant therein including the preparation of comprehensive manuals containing full course notes, reference material and timetable. The programme and manuals shall be submitted for the review and consent of the Engineer at least fifty-six (56) days before any training commences.~~
- ~~1.69—Unless otherwise specified in the Particular Safety Specification, the training manuals and all technical literature shall be prepared in both the all training shall be conducted in the language of the Country and also the English language.~~
- ~~1.70—The Contractor shall use visual media as much as possible throughout the training process.~~
- ~~1.71—Training shall cover both theoretical and practical operation and maintenance procedures on the Works including the Plant actually constructed and/or installed.~~
- ~~1.72—The training courses shall be conducted by the Contractor and also by senior qualified staff of the manufacturers and system providers all of whom shall be experienced in each specific aspect of the Plant supplied and/or installed by them and training therefor.~~
- ~~1.73—Factory User Training shall not be required unless otherwise specified in the Particular Safety Specification.~~
- ~~1.74—The Employer shall nominate the candidates for training. The Contractor shall have the right to decline any of the candidates if he considers that such candidates do not meet his required minimum academic, educational, vocational or practical standards or for reasons of extreme incompetence and to request the Employer to nominate substitutes.~~
- ~~1.75—The Employer shall have all candidates who have been accepted by the Contractor, ready and available for the User Training in accordance with the Contractor's approved user training programme.~~
- ~~1.76—Upon completion of User Training the Contractor shall test all candidates with written and practical examination and ascertain for himself that they have acquired sufficient knowledge and aptitude to use, operate and maintain the respective Plant, equipment or systems and obtain the consent of the Engineer through submission to the Engineer of reviewed and graded test results.~~
- ~~1.77—The periods of training shall be determined by the Contractor according to the particular subject concerned or as otherwise~~

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~~provided in the Particular Safety Specification. Training generally shall be of sufficient periods for the Contractor to satisfy himself that the candidates are fully and adequately qualified for the safe use, operation and maintenance of the Works or any part or Section thereof including all Plant therein. Unless otherwise specified in the Particular Safety Specification, overall training duration shall not be less than fifty-six (56) days.~~

~~1.78 Unless otherwise required for operational reasons, User Training shall only be conducted during the normal working hours and on normal working week days.~~

~~1.79 Periods of User Training shall be extended or repeated, if on completion of the planned training period(s), in either the Contractor's or the Engineer's opinion, candidates are not sufficiently qualified to safely use, operate and/or maintain the Works or any part or Section thereof including all Plant therein.~~

~~1.80 The Contractor shall issue formal certificates, officially indicating that candidates are qualified by the Contractor to safely operate and maintain the Works or any part or Section thereof including all Plant therein or, in the case of trainers, to train future candidates.~~

1.81-1.39 Unexploded Ordnance (UXO)

NK: we considers JICA may not specify 1.39 in detail as the minutes of meeting below:

MM: This section will be left in the next draft and perhaps deleted in the final draft.

NK: We propose to specify only to remind the Contractor to follow the requirement in Particular Safety Specification.

MD's reply: The Employer should inform the Contractor of the likely existence of UXO and if possible remove. The Contractor shall report any UXO then found to the Employer/Engineer for further instruction. This needs to be included in JSSS and the User Guide so that both parties are aware of the other's obligations. I have edited this to make the Employer responsible and have and separated accordingly.

NK: We have no comments to 1.39. xd v

For your further information, please note that this is an Employer's Risk under GC 17.3(d).

The problem is, that GC 17.3 places no obligation upon the Employer (who should be more aware than anyone of the possible risk) to advise of the existence, to survey and remove such UXO before bidding or after if then encountered.

This is the reason behind including this in JSSS.

This clause may need some slight modification when I again work on the User Guide.

~~1.81-1.39.1~~ If there is a possibility that any UXO may exist at the Site, then unless otherwise specified in the Particular Safety Specification, this shall be surveyed and investigated by the Employer and the result of this investigation shall be clearly stated and full information including survey and investigation results shall be provided by the Employer in the Particular Safety Specification.

~~1.81-1.39.2~~ Unless otherwise specified in the Particular Specification, clearance of UXO shall be undertaken by the Employer and at the cost of the Employer.

~~1.81-1.39.3~~ Completion of clearance shall be evidenced through the issue by the Employer's specialist remover of a certificate of UXO clearance from the Site area. Unless otherwise approved by the Engineer, no work shall commence in affected areas of the Site until the receipt of a copy of this certificate.

~~1.81-1.39.4~~ Should the Contractor encounter any UXO, after a clearance certificate has been issued in accordance with the above, he shall immediately stop all affected work at the affected area of the Site, clear

<p>the area of all Contractor's Personnel, Employer's Personnel and all other persons and notify the Engineer and relevant authorities.</p> <p><u>1-81-51.39.5</u> Unless otherwise agreed between Employer and Contractor, the Employer shall then make further arrangements for removal and disposal, then obtain and issue a further clearance certificate. Work shall resume in the affected areas after the Contractor has received a copy of the further clearance certificate together with any further instructions from the Engineer.</p>		
<p>ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS</p> <p>Annex 1.1: Definitions and Abbreviations</p> <p>A1.1.1. The following words and expressions in JSSS relating to the Conditions of Contract and the content of JSSS shall have the definitions stated:</p> <ol style="list-style-type: none"> (1) "Executing Agency" means the representative organisation of a recipient government of the JICA Loan tasked with the responsibility (inter-alia) for managing the implementation of the Project including preparation of Bidding Documents and usually defined in the Contract as the Employer. (2) "GC" and "PC" followed immediately by a reference number means respectively General Conditions of Contract and Particular Conditions of Contract, Clause or Sub-Clause. (3) "Health and Safety Officer" or "HSO" means the Contractor's health and safety officer at the Site to be appointed by the Contractor in accordance with GC 6. 7 [<i>Health and Safety</i>] as construed in accordance with JSSS 1.12 [<i>Health and Safety Officer at the Site (HSO)</i>]. (4) "JICA Standard Safety Specification" or "JSSS" means the document of this title published officially by JICA on their website as may be further modified by the Particular Safety Specification for the Works. (5) "Method Statement" means a document that shows the details of the arrangements, methods and resources that the Contractor proposes to adopt for the execution of the Works or any part of the Works, as referred to in GC 4.1 [<i>Contractor's General Obligations</i>] and supplemented by JSSS 1.9 [<i>Contractor's Method Statements</i>]. (6) "Operation Leader" (also known variously as a "Ganger", "Leading Hand", "Foreman" (working and non-working), "Team Leader", "Superintendent", "Supervisor" and the like) means a member of the Contractor's workforce who through experience, training and testing is deemed by the Contractor to be appropriately qualified, skilled and experienced in their respective trade or occupation to work with, lead and/or supervise the teams of workers, directing them and/or superintending them in the performance of their assigned duties and to ensure their compliance with the Contractor's safety regulations and who can also be referred to within the OSHA definition as a "Competent Person". (7) "OSHA" means the technical requirements of "OSHA Standard Part 1926 Safety and Health Regulations for Construction", as written in Code of Federal Regulations (29 CFR) and published by 	<p>ANNEXES TO CHAPTER 1: GENERAL REQUIREMENTS</p> <p>Annex 1.1: Definitions and Abbreviations</p> <p>A1.1.1. 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(8) **“Particular Safety Specification”** means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project ~~as illustrated in Annex 1.4 [Figures and Illustrations].~~

(9) **“Project Safety Specification”** means the document that contains Part 1 [JSSS] and Part 2 [Particular Safety Specification] ~~as illustrated in Annex 1.4 [Figures and Illustrations].~~

(10) **“Project”** means the particular Works and services to be implemented by the Borrower and described in the loan agreement, utilising the funds provided by JICA under the terms mutually agreed for that purpose.

(11) **“Safety Plan”** means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods and resources that the Contractor proposes to adopt for health and safety management of the entire Works or any Section or part of the Works, as referred to in GC 4.1 [Contractor’s General Obligations] as supplemented by JSSS 1.7 [Contractor’s Safety Plans].

(12) **“Safety”** shall also mean “occupational health and safety” and “health and safety”.

(13) **“User Guide”** means the document of that title separately published by JICA and which contain the guidelines for incorporation of JSSS into the bidding and contract documents for relevant Projects.

NK: There is no “User Guide” specified in JSSS. Does it necessary to define it in JSSS? I think as it will be published on line probably at the same time as JSSS, it does need definition and more importantly, it requires a clear statement in JSSS, that it is NOT a part of the Contract (see added clause JSSS 0.1).

It is my understanding that the User Guide is for the reference of the Employer only and it is probably also a good idea therefore to describe it as “An Employer’s Guide” or something like that to make it very clear.

A1.1.2. The following words and expressions in JSSS relating to the technical content of JSSS shall have the definitions stated:

(1) **“Accident Response”** means the requirements for the Contractor’s response to an accident at the Site or Sites, as further referred to in JSSS 1.23.1 [Accident Response Plan].

(2) **“Confined Spaces”** means spaces that are not designed for continuous occupation but are provided for persons to enter and perform certain works (including inspection, maintenance and repairs) and that consequently may have limited or restricted means for entry or exit. Due to the likelihood of insufficient ventilation, the Contractor shall be aware of a potentially unhealthy or dangerous environment and he shall be deemed to have investigated and taken measures against such risks in every case.

(3) **“Cofferdam”** means a temporary enclosing wall constructed in water, to permit the enclosed area to be pumped out and used as safe and accessible working space.

(4) **“Dangerous Goods”** means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive

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(4) **“Dangerous Goods”** means corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising, or water-reactive materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.

(5) **“Dangerous Work”** means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.

(8) **“Particular Safety Specification”** means the document that contains the particular additions and modifications to JSSS, necessary to create a precise and relevant specification of the health and safety requirements for the Project.

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- コメントの追加 [SS97]: May the Project be replaced with Works*
- コメントの追加 [MJD98R97]: Yes it can be, I have changed already
- コメントの追加 [SS99]: “Project” will be deleted as JICA commented to User Guide.
- コメントの追加 [MJD100R99]: Yes done already

<p>materials. They must be identified in the workplace (and when being transported) by different coloured 'diamond' symbols, classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion and poisoning. An accident involving dangerous goods could seriously injure persons and seriously damage property and/or the environment.</p> <p>(5) “Dangerous Work” means Permanent or Temporary Works to be executed by the Contractor in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.</p> <p>(6) “Diver” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.</p> <p>For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [<i>Diving Works</i>].</p> <p>(7) “Earthwork Support” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.</p> <p>(8) “Elevated Access Structures” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for construction operations or steeply sloping or offshore Sites.</p> <p>(9) “Emergency Response” means the requirements for the Contractor’s response to any Emergency at the Site or Sites, as further referred to in JSSS 1.26 [<i>Emergency Response Plan</i>].</p> <p>(10) “Falling Objects” means objects falling from heights including displaced, dropped, or blown Goods, tools, debris or waste material.</p> <p>(11) “Falsework” means temporary supporting structures used to support parts of the Temporary Works or Permanent Works during construction, until the latter are stable, self-supporting and safe.</p> <p>(12) “Formwork” means temporary containment structures for in-situ concrete and the immediately supporting members pending the concrete achieving sufficient strength to support its own weight and act safely as a structural component.</p> <p>(13) “Hazardous Substances” means any substance, whether solid, liquid or gas, that may cause harm to health.</p> <p>(14) “Hazardous Areas” means areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts. Every Hazardous Area is different and each has specific requirements depending on the nature of the environment in that area and the elements that are present. Hazardous areas may be categorised by the level of risk of an explosion based on the frequency and duration of the occurrence of an explosive atmosphere by classifying the Hazardous Area as Zone 0, Zone 1 or Zone 2, where:</p>	<p>(6) “Diver” means a worker working in water using underwater breathing apparatus which supplies compressed breathing gas at the ambient pressure.</p> <p>For definition of further terms relating to Diving Works, refer to JSSS Chapter 10 [<i>Diving Works</i>].</p> <p>(7) “Earthwork Support” means the permanent or temporary structural support arrangements to prevent the collapse or weakening of the surfaces of any excavation including for example basement, pit, trench or slope excavation.</p> <p>(8) “Elevated Access Structures” means the substantial, elevated, temporary working platforms, usually comprised of structural steel columns, beams, framing and floor decking and used for performing work at Sites with difficult access or with restricted room for 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areas where there is a risk of explosion due to the presence of flammable or explosive gases, vapours, mists or dusts.</p> <p>(15) “Hoisting Operation” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.</p> <p>For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [<i>Hoisting and Rigging</i>].</p> <p>(16) “Operational Area” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.</p> <p>(17) “Personal Fall Arrest System” or “PFAS” means a fall protection system that is designed to arrest a worker in a fall from a working level.</p>	<p>especially and potentially dangerous and which requires the use of specialist skills, safety equipment, safety measures and PPE.</p> <p>(6) 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<p>(a) Zone 0: An area in which an explosive gas atmosphere is present continuously or for long periods;</p> <p>(b) Zone 1: An area in which an explosive gas atmosphere is likely to occur in normal operation; and</p> <p>(c) Zone 2: An area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it occurs, will only exist for a short time.</p> <p>NK: May we know the source of Classification? May we know if this Zones are specified in JSSS? Classification of Zones is from the Technical Measures Document of HSE: https://www.hse.gov.uk/comah/sragtech/techmeasuresacls.htm OSHA also have a classification which is more complicated. Please be aware that in the absence of information in your draft, this is my suggestion but in every case and I rely on JICA and NK to check and confirm this. If you do not want to use this, please advise me and I will delete. NK: 再考いたします。（現時点では JSSS では規定していません。）</p> <p>(15) “Hoisting Operation” means the selection of Hoisting Equipment appropriate to the purpose, preparation of Method Statements and Safety Plans and safely implementing the hoisting and placing of loads in position.</p> <p>For definition of further terms relating to Hoisting Operations and associated rigging, refer to JSSS Chapter 6 [<i>Hoisting and Rigging</i>].</p> <p>(16) “Operational Area” means an area in a functioning process, treatment, manufacturing or like facility where the Contractor is required to perform Works while the Employer is continuing operations.</p> <p>(17) “Personal Fall Arrest System” or “PFAS” means a fall protection system that is designed to arrest a worker in a fall from a working level.</p> <p>(18) “Personal Fall Restraint System” or “PFRS” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.</p> <p>(19) “Personal Protective Equipment” or “PPE” means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.</p> <p>(20) “Safety Belt” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.</p> <p>(21) “Safety Harness” means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.</p> <p>(22) “Scaffold” or “Scaffolding” means a temporary structure or structures that provide access on or from which persons work or to</p>	<p>(18) “Personal Fall Restraint System” or “PFRS” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.</p> <p>(19) “Personal Protective Equipment” or “PPE” means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.</p> <p>(20) “Safety Belt” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.</p> <p>(21) “Safety Harness” means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.</p> <p>(22) “Scaffold” or “Scaffolding” means a temporary structure or structures that provide access on or from which persons work or to support Goods.</p> <p>(23) “Skill Training” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [<i>Skill Training</i>]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.</p> <p>(24) “Spotter” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [<i>Spotters Flagmen and the Like</i>].</p> <p>Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.</p> <p>(25) “Trade Effluent” means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.</p> <p>(26) “Unexploded Ordnance” or “UXO” shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and</p>	<p>mentioned in JSSS may be in some way affected by the execution of the Works.</p> <p>(18) “Personal Fall Arrest System” or “PFAS” means a fall protection system that is designed to arrest a worker in a fall from a working level.</p> <p>(19) “Personal Fall Restraint System” or “PFRS” (also referred to as a “Positioning Device System”) means a fall protection system that is designed to restrict the movement of workers, preventing them from reaching the edge of any working area and therefore eliminating the risk of a fall.</p> <p>(20) “Personal Protective Equipment” or “PPE” means equipment that is worn by the person to minimize exposure to hazards that cause serious workplace injuries and illnesses, which may result from falling objects, excessive noise, dust, contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.</p> <p>(21) “Safety Belt” means a sufficiently substantial strap to be secured about the waist for attaching to a lanyard or line to restrain the movement of workers and prevent them from reaching locations from where they may be at risk of falling.</p> <p>(22) “Safety Harness” means a sufficiently substantial harness to be secured about the body for attaching to a lanyard, lifeline and deceleration device to safely arrest and support any worker during a fall.</p> <p>(23) “Scaffold” or “Scaffolding” means a temporary structure or structures that provide access on or from which persons work or to support Goods.</p> <p>(24) “Skill Training” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [<i>Skill Training</i>]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.</p> <p>(25) “Spotter” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [<i>Spotters Flagmen and the Like</i>].</p> <p>Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.</p> <p>(26) “Trade Effluent” means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.</p> <p>(27) “Unexploded Ordnance” or “UXO” shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition,</p>
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<p>support Goods.</p> <p>(23) “Skill Training” means additional training to be provided by the Contractor for the counterpart Contractor’s Personnel to develop and improve their trade skills in performing their work at the Site and shall include OJT and theoretical training in accordance with JSSS 1.21 [<i>Skill Training</i>]. Such training shall also include examining and testing by the Contractor and certification of attainment in such skills.</p> <p>(24) “Spotter” means a member of the Contractor’s Personnel who is generally responsible for warning other Contractor’s and Employer’s Personnel and other persons and keeping them away from working operations and areas, for assisting drivers of trucks and operators of other Contractor’s Equipment in positioning their vehicles and equipment particularly when reversing, positioning or hoisting, and such further duties as are assigned to them in JSSS Section 2.4 [<i>Spotters Flagmen and the Like</i>].</p> <p>Any reference to a “Spotter” in JSSS shall also be deemed to include a reference to a banksman, flagman or signaller.</p> <p>(25) “Trade Effluent” means any liquid waste (effluent) that is discharged from premises being used for a business, trade or industrial process, other than surface water and domestic sewage.</p> <p>(26) “Unexploded Ordnance” or “UXO” shall mean unexploded bombs, or explosive remnants of war or explosive weapons (such as bombs, shells, grenades, land mines, naval mines, cluster munition, and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.</p> <p>(27) “User Training” means training to be provided by the Contractor for those Employer’s Personnel who shall be using, managing, operating, repairing and maintaining the Works, and any part or Section thereof and all Plant therein to ensure that such personnel are fully qualified and able to perform their duties in a safe, systematic and competent manner without risk of accident. “Working Platform” means a platform on or within a scaffold that is intended and designed to support persons or Goods.</p> <p>A1.1.3. The following abbreviations of technical terms shall have the meanings stated:</p> <p>AED Automatic External Defibrillator BMGV Biological Monitoring Guidance Values CPR Cardiopulmonary Resuscitation ODA Official Development Aid OJT On Job Training PFAS Personal Fall Arrest System PFRS Personal Fall Restraint System PPE Personal Protective Equipment TBM Tool Box Meetings TWA Time Weighted Average WEL Workplace Exposure Limits</p>	<p>still pose a risk of detonation, sometimes long after they were used or discarded.</p> <p>(27) “Working Platform” means a platform on or within a scaffold that is intended and designed to support persons or Goods.</p> <p>A1.1.3. The following abbreviations of technical terms shall have the meanings stated:</p> <p>AED Automatic External Defibrillator BMGV Biological Monitoring Guidance Values CPR Cardiopulmonary Resuscitation ODA Official Development Aid OJT On Job Training PFAS Personal Fall Arrest System PFRS Personal Fall Restraint System PPE Personal Protective Equipment TBM Tool Box Meetings TWA Time Weighted Average WEL Workplace Exposure Limits</p> <p>A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:</p> <p>ACI American Concrete Institute ANSI American National Standards Institute</p>	<p>and the like) that did not explode when they were employed and still pose a risk of detonation, sometimes long after they were used or discarded.</p> <p>(28) “Working Platform” means a platform on or within a scaffold that is intended and designed to support persons or Goods.</p> <p>A1.1.3. The following abbreviations of technical terms shall have the meanings stated:</p> <p>AED Automatic External Defibrillator BMGV Biological Monitoring Guidance Values CPR Cardiopulmonary Resuscitation ODA Official Development Aid OJT On Job Training PFAS Personal Fall Arrest System PFRS Personal Fall Restraint System PPE Personal Protective Equipment TBM Tool Box Meetings TWA Time Weighted Average WEL Workplace Exposure Limits</p> <p>A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:</p> <p>ACI American Concrete Institute ANSI American National Standards Institute</p>
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<p>A1.1.4. The following abbreviations of standards, codes and the like shall have the meanings stated:</p> <p>ACI American Concrete Institute</p> <p>ANSI American National Standards Institute.</p> <p>ASHTO American Association of State of Highway Transportation Officials</p> <p>ASME American Society of Mechanical Engineers</p> <p>ASTM American Society for Testing and Materials.</p> <p>BS British Standard.</p> <p>BS EN British Standard European Norm.</p> <p>HSE UK Health and Safety Executive.</p> <p>ISO International Organisation for Standardisation.</p> <p>ILO International Labor Organization.</p> <p>JIS Japanese Industrial Standards.</p> <p>A1.1.5. Unless otherwise instructed by the Engineer, a reference to any standard or code shall mean a reference to the latest issued edition of that standard or code as at the Base Date of the Contract.</p>	<p>ASHTO American Association of State of Highway Transportation Officials</p> <p>ASME American Society of Mechanical Engineers</p> <p>ASTM American Society for Testing and Materials.</p> <p>BS British Standard</p> <p>BS EN British Standard European Norm</p> <p>HSE UK Health and Safety Executive</p> <p>ISO International Organisation for Standardisation</p> <p>ILO International Labor Organization</p> <p>JIS Japanese Industrial Standards</p> <p>Annex 1.2: Content of Bid Stage Safety Plan</p> <p>A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [<i>Contractor's Safety Plan</i>]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.</p>	<p>ASHTO American Association of State of Highway Transportation Officials</p> <p>ASME American Society of Mechanical Engineers</p> <p>ASTM American Society for Testing and Materials.</p> <p>BS British Standard</p> <p>BS EN British Standard European Norm</p> <p>HSE UK Health and Safety Executive</p> <p>ISO International Organisation for Standardisation</p> <p>ILO International Labor Organization</p> <p>JIS Japanese Industrial Standards</p> <p>Annex 1.2: Content of Bid Stage Safety Plan</p> <p>A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [<i>Contractor's Safety Plan</i>]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.</p>
<p>Annex 1.2: Content of Bid Stage Safety Plan</p> <p>A1.2.1 This Annex lists the required content for the Bid Stage Safety Plan which is to be provided in accordance with "Standard Bidding Documents Under Japanese ODA Loans, Procurement of Works", published by the Japan International Cooperation Agency (JICA). The Safety plan is to be included in the Bidding Documents Part 1 Bidding Procedures, Section 1. Instructions to Bidders, Section IV. Bidding Forms Technical Proposal, Health and Safety Plan, page BF-39.</p> <p>NK: We consider that A1.2.1 will be mentioned in User Guide and deleted in JSSS. How do you think?</p> <p>I think both are useful as the contractor should also be aware of requirements. It is very important that the Employer/Consultant are prevented from altering the detail of this Annex in their Bidding Documents in any way, as all items are required in the Bid Stage Plan, all are coordinated with JSSS, the same structure, terminology and numbering must be used.</p> <p>I suggest that this will reworded something like the following, which I will do when go back to work on the User Guide further:</p> <p>A1.2.1. This Annex lists the required content for the Bid Stage Safety Plan as referred to in JSSS 1.7 [<i>Contractor's Safety Plan</i>]. Unless otherwise Specified in the Particular Safety Specification, the Contractor shall follow this format and structure in the Bid Stage Safety Plan. The same format and structure shall be used later for the Commencement Stage Safety Plan but with the content and developed as necessary to show the required detail.</p> <p>A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder's intentions, so that this can be understood and properly evaluated. (JC72)</p>	<p>Annex 1.2: Content of Bid Stage Safety Plan</p> <p>A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder's intentions, so that this can be understood and properly evaluated.</p>	<p>Annex 1.2: Content of Bid Stage Safety Plan</p> <p>A1.2.2. The Bid Stage Safety Plan shall be an outline plan but it must cover each of the items listed below with sufficient detail provided to demonstrate that the Bidder understands the requirements and indicates the Bidder's intentions, so that this can be understood and properly evaluated.</p>
(1) Description of the Works		

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コメントの追加【伊藤95】: Please add "outline (or policy?) of risk assessment" as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.

A1.1.1 (11)

"Safety Plan" means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods.....

<p>JC72: Please add "outline (or policy?) of risk assessment" as one of the items to be included in the Bid Stage Safety Plan in accordance with the definition of Safety Plan.</p> <p>A1.1.1 (1) "Safety Plan" means a document (or documents) that contains the overall risk assessments together with the details of all health and safety arrangements, methods, etc.</p> <p>NK5/6: To MD, we would like to ask you to add as commented.</p> <p>(1) Description of the Works A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.</p> <p>(2) Bidder's Corporate Policy on Health and Safety Management A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic company policies on risk assessment and health and safety management.</p> <p>(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.</p> <p>(4) Health and Safety Laws A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.</p> <p>(5) Bidder's Safety Management System (JC73) Refer to JSSS 1.5 [Contractor's Safety Management System] Confirm-Describe how which scheme the Bidder institutes the Safety Management System is accredited under.</p> <p>JC73: Modified in accordance with modification to JSSS1.5 NK5/6: Will modify as commented.</p> <p>(6) Temporary Works</p>	<p>A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.</p> <p>(2) Bidder's Corporate Policy on Health and Safety Management A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic company policies on risk assessment and health and safety management.</p> <p>(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.</p> <p>A description of the responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams.</p> <p>(4) Health and Safety Laws A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.</p> <p>(5) Bidder's Safety Management System Refer to JSSS 1.5 [Contractor's Safety Management System] Describe the scheme that the Bidder is proposing and how he intends to implement same.</p> <p>(6) Temporary Works Refer to JSSS 1.37 [Design and Management of Temporary Works]. A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.</p>	<p>(1) Description of the Works A description of the Works supported by overall layout plan(s) to provide a clear understanding of the overall layout and content of the Works and showing main construction items and areas, roads, Site access and egress locations, working areas, storage areas, temporary offices, laydown areas, warehouses and like facilities and including a summary of principal work items and significant quantities, etc.</p> <p>(2) Bidder's Corporate Policy on Health and Safety Management A description of the Bidder's corporate health and safety management policy covering the aims and intentions for improving the level of health and safety. The policy shall include a description of the purpose of health and safety (prevention of occupational accidents, maintenance of physical and mental health of workers, etc.), a description of the basic company policies on risk assessment and health and safety management.</p> <p>(3) Health and Safety Management System, Responsibility and Authority of Bidder's Personnel A description of the health and safety management organisation at Site headed by the Bidder's Health and Safety Officer at Site (HSO) and showing the approximate numbers, responsibilities and authority of any other Contractor's Personnel involved in health and safety management at the Site.</p> <p>A description of the responsibilities and authority of the Bidder's head office health and safety personnel together with the communication procedures for contact and support for the Site safety teams.</p> <p>(4) Health and Safety Laws A list of Laws (including all standards) of the Country which require the Bidders compliance for the health and safety of his workers and for the health and safety management of the Works. If the Contractor considers any parts to be superseded by JSSS then the relevant Clause number of JSSS shall be inserted.</p> <p>(5) Bidder's Safety Management System Refer to JSSS 1.5 [Contractor's Safety Management System] Describe the scheme that the Bidder is proposing and how he intends to implement same.</p> <p>(6) Temporary Works Refer to JSSS 1.37 [Design and Management of Temporary Works]. A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.</p>
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コメントの追加 [岡本96]:
Modified in accordance with modification to JSSS1.5

<p>Refer to JSSS 1.37 [Design and Management of Temporary Works].</p> <p>A Safety Plan for Temporary Works listing the principal items, describing the content, and specifying the outline of safety measures to be applied to ensure compliance with the requirements.</p> <p>NK: JICA added "outline" in the last comment. DK I have amended</p> <p>(7) Temporary Facilities on Site</p> <p>The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.)</p> <p>NK: We consider that the above sentence is independent clause from (6) above and locate in some place. have edited as above</p> <p>(8) Safety Measures for Contractor's Design of the Permanent Works</p> <p>If, under GC 4.1 [Contractor's General Obligations], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.</p> <p>(9) Safety Plan for the Works</p> <p>NK: May the title be Works? have edited as above</p> <p>A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.</p> <p>(10) Safety Plan for Dangerous Work.</p> <p>Refer to JSSS 1.22 [Dangerous Work]</p> <p>A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [Definitions and Abbreviations] and GC 4.1 [Contractor's General Obligations].</p> <p>(11) Permit to Work System</p> <p>Refer to JSSS 1.23 [Permit to Work System]</p> <p>A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.</p> <p>(12) Safety Measures for Contractor's Equipment</p> <p>Refer to JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE]</p> <p>A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.</p> <p>(13) Proposed Health and Safety Incentive Scheme</p>	<p>(7) Temporary Facilities on Site</p> <p>The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.).</p> <p>(8) Safety Measures for Contractor's Design of the Permanent Works</p> <p>If, under GC 4.1 [Contractor's General Obligations], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.</p> <p>(9) Safety Plan for the Works</p> <p>A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.</p> <p>(10) Safety Plan for Dangerous Work.</p> <p>Refer to JSSS 1.22 [Dangerous Work]</p> <p>A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [Definitions and Abbreviations] and GC 4.1 [Contractor's General Obligations].</p> <p>(11) Permit to Work System</p> <p>Refer to JSSS 1.23 [Permit to Work System]</p> <p>A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.</p> <p>(12) Safety Measures for Contractor's Equipment</p> <p>Refer to JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE]</p> <p>A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. It shall include a general description of all regular maintenance and repair activities.</p> <p>(13) Proposed Health and Safety Incentive Scheme</p> <p>Refer to JSSS 1.34 [Health and Safety Incentive Schemes]</p> <p>A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.</p> <p>(14) Safety Information Sharing and Communications Policy</p>	<p>(7) Temporary Facilities on Site</p> <p>The plan shall include a description of the general health and safety rules (e.g. smoking areas, traveling speed on Site, cleanliness, tidiness, latrines, wash rooms, shelters, etc.).</p> <p>(8) Safety Measures for Contractor's Design of the Permanent Works</p> <p>If, under GC 4.1 [Contractor's General Obligations], the Contract specifies that the Contractor shall design any part of the Permanent Works, the Bidder shall provide a description of the arrangements for controlling risks arising from such design of the Permanent Works.</p> <p>(9) Safety Plan for the Works</p> <p>A Safety Plan for the whole of the Works with separate parts provided for each part of the Works, including descriptions of the likely risks and measures for preventing accidents on the Site.</p> <p>(10) Safety Plan for Dangerous Work.</p> <p>Refer to JSSS 1.22 [Dangerous Work]</p> <p>A listing of any Dangerous Work which will be encountered on the Site and general details of the Safety Plan for such Dangerous Work by reference to JSSS Annex 1.1 [Definitions and Abbreviations] and GC 4.1 [Contractor's General Obligations].</p> <p>(11) Permit to Work System</p> <p>Refer to JSSS 1.23 [Permit to Work System]</p> <p>A listing of all high-risk areas of the Works that shall be subject to the Permit to Work System together with a description of proposed procedure.</p> <p>(12) Safety Measures for Contractor's Equipment</p> <p>Refer to JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE]</p> <p>A description of the procedures for inspecting and maintaining the Contractor's Equipment together with all spare parts, including inspections prior to shipment, after arrival at Site and during use to ensure that all Contractor's Equipment at the Site is maintained in a safe, efficient, non-polluting and acceptable condition. 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<p>Refer to JSSS 1.34 [<i>Health and Safety Incentive Schemes</i>]</p> <p>A description of the Proposed Health and Safety Incentive Scheme, designed to encourage conscious consideration of health and safety by Contractor's Personnel and to reward improvement.</p> <p>(14) Safety Information Sharing and Communications Policy</p> <p>A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.</p> <p>A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.</p> <p>(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)</p> <p>Refer to JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>]</p> <p>A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.</p> <p>(16) Site Inspection Plan</p> <p>A description of the methods for Site inspections by the HSO, types of inspection and frequency.</p> <p>The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving instructions, stopping work</p> <p>(17) Site Security</p> <p>A description of the proposed Site security methods explaining how access to the Site by third parties, neighbours, nearby residents and any trespassers upon the Site will be prevented or (if and when applicable) permitted.</p> <p>The description shall include the provision and control of entry and exit gates, barriers etc., security posts, security patrols and any other measures to reasonably ensure the security of the Site.</p> <p>(18) Policy for Preventing Traffic Accidents</p> <p>A description of the measures to be implemented for the prevention of traffic accidents on the public roads outside the Site and on roads and all other trafficked areas within the Site.</p> <p>A description of the measures to be implemented to prevent workers riding in the back of pick-ups or trucks, or boarding or alighting from them near the Site, compulsory wearing of seat belts, systems of warning, punishment and dismissal for non-compliance should also be included.</p> <p>(19) Reporting Procedure for Unsafe Conditions and Behaviour</p> <p>A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with</p>	<p>A description of the information sharing and communication systems for health and safety within the organisation of the Contractor and between the Contractor and Employer, Engineer and relevant government agencies, etc. Reference shall be made to the various health and safety meetings described in JSSS.</p> <p>A description of safety management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.</p> <p>(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)</p> <p>Refer to JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>]</p> <p>A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.</p> <p>(16) Site Inspection Plan</p> <p>A description of the methods 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management activities for Contractor's Personnel shall be included together with the method for giving and receiving feedback and opinions regarding health and safety.</p> <p>(15) Health and Safety Equipment, Facilities and Personal Protective Equipment (PPE)</p> <p>Refer to JSSS 1.35 [<i>Contractor's Equipment, Temporary Works, Safety Equipment and PPE</i>]</p> <p>A description of the intended policies for the deployment of safety equipment, facilities and PPE to reduce health and safety risks, detailing the items and methods for providing and replacing (when worn, lost or damaged) general PPE and the use of additional PPE for particular working locations, environments and conditions.</p> <p>(16) Site Inspection Plan</p> <p>A description of the methods for Site inspections by the HSO, types of inspection and frequency.</p> <p>The description shall also include the methods for reporting, recording and utilising results and also for posting warnings, no entry notices, giving 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non-compliance should also be included.</p> <p>(19) Reporting Procedure for Unsafe Conditions and Behaviour</p> <p>A procedure for the reporting of unsafe conditions and unsafe behaviour on the Site (including near-misses) together with improvement actions including instructions, implementation and the recording of improvement measures.</p> <p>(20) Accident Response Plan</p> <p>Refer to JSSS 1.23.1 [<i>Accident Response Plan</i>]</p>
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<p>improvement actions including instructions, implementation and the recording of improvement measures.</p> <p>(20) Accident Response Plan Refer to JSSS 1.23.1 [<i>Accident Response Plan</i>]</p> <p>The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.</p> <p>It is to be noted that JSSS and the Contract contain minimum requirements and the Contractor shall provide such additional facilities and measures that he considers necessary to meet the high standard of health and safety management expected.</p> <p>NK: We consider that the above sentence is independent clause from (19) above and locate in some place. Deletion is OK</p> <p>(21) Health Care Plan Refer to JSSS 1.36 [<i>Health Matters</i>]</p> <p>A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc.</p> <p>A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.</p> <p>(22) Fire Response Plan Refer to JSSS 2.8 [<i>Fire Prevention</i>]</p> <p>Details of the fire prevention services to be provided at the Site. The Fire Response Plan required by JSSS 2.8 [<i>Fire Prevention</i>].</p> <p>(23) Emergency Response Plan Refer to JSSS 1.26 [<i>Emergency Response Plan</i>]</p> <p>Details of the Emergency Response Plan.</p> <p>(24) Monitoring and Review of Health and Safety Management Activities The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [<i>Contractor's Safety Management Activities</i>]).</p> <p>(25) Safety Induction Training Refer to JSSS 1.20 [<i>Safety Induction Training</i>]</p> <p>An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.</p> <p>Details of special training required for Dangerous Works shall also be included.</p> <p>(26) Skill Training</p>	<p>The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.</p> <p>(21) Health Care Plan Refer to JSSS 1.36 [<i>Health Matters</i>]</p> <p>A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc..</p> <p>A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.</p> <p>(22) Fire Response Plan Refer to JSSS 2.8 [<i>Fire Prevention</i>]</p> <p>Details of the fire prevention services to be provided at the Site. The Fire Response Plan required by JSSS 2.8 [<i>Fire Prevention</i>].</p> <p>(23) Emergency Response Plan Refer to JSSS 1.26 [<i>Emergency Response Plan</i>]</p> <p>Details of the Emergency Response Plan.</p> <p>(24) Monitoring and Review of Health and Safety Management Activities The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [<i>Contractor's Safety Management Activities</i>]).</p> <p>(25) Safety Induction Training Refer to JSSS 1.20 [<i>Safety Induction Training</i>]</p> <p>An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.</p> <p>Details of special training required for Dangerous Works shall also be included.</p> <p>(26) Skill Training Refer to JSSS 1.21 [<i>Skill Training</i>]</p> <p>An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom</p>	<p>The Plan shall describe the facilities to be provided and also cover the preparation and submission of the accident report, describing when an accident report will be prepared and submitted, the method of investigation of causes, planning and implementation of preventive measures against recurrence.</p> <p>(21) Health Care Plan Refer to JSSS 1.36 [<i>Health Matters</i>]</p> <p>A description of the proposed facilities, furniture and equipment for rest stations, restroom, dining facilities, canteens, sanitary facilities, sports and leisure facilities, shower facilities, changing room etc..</p> <p>A health care plan with services and facilities for maintaining the health and occupational health of all Contractor's Personnel.</p> <p>(22) Environmental, Temporary Works and Structural Monitoring Plans Refer to JSSS 2.1.7 [<i>Monitoring and Records</i>]</p> <p>A description of the proposed monitoring equipment, instruments Contractor's Personnel and methods for monitoring and control of the working environment, the performance of the Temporary Works and the avoidance of damage to other properties.</p> <p>(23) Fire Response Plan Refer to JSSS 2.8 [<i>Fire Prevention</i>]</p> <p>Details of the fire prevention services to be provided at the Site. The Fire Response Plan required by JSSS 2.8 [<i>Fire Prevention</i>].</p> <p>(24) Emergency Response Plan Refer to JSSS 1.26 [<i>Emergency Response Plan</i>]</p> <p>Details of the Emergency Response Plan.</p> <p>(25) Monitoring and Review of Health and Safety Management Activities The procedures for monitoring and reviewing the purpose, method, timing, utilisation of results, development, etc. of health and safety management activities such as safety inspections, morning toolbox meetings, 5S activities (refer to JSSS 1.15 [<i>Contractor's Safety Management Activities</i>]).</p> <p>(26) Safety Induction Training Refer to JSSS 1.20 [<i>Safety Induction Training</i>]</p> <p>An outline description of the required safety induction training for all proposed health and safety training plans, describing methods, facilities, time, teaching materials, policies for selecting trainers, etc. and covering safety induction.</p>
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<p>Refer to JSSS 1.21 [Skill Training]</p> <p>An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.</p> <p>(a) — User Training Refer to JSSS 1.38 [User Training] An outline description of the proposed user training plans for the Employer's Personnel in the Safe Use, Operation and Maintenance of the Works. Legal requirements</p> <p>A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.</p>	<p>components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.</p> <p>(27) Legal Requirements</p> <p>A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.</p>	<p>Details of special training required for Dangerous Works shall also be included.</p> <p>(27) Skill Training</p> <p>Refer to JSSS 1.21 [Skill Training]</p> <p>An outline description of the proposed skill training plans for local counterpart Operation Leaders, describing OJT and classroom components, facilities, participants, time, teaching materials, policies for selecting trainers and the counterparts.</p> <p>(28) Legal Requirements</p> <p>A description in brief with references to the legal requirements and remedies in the Country for injuries and death at work and for persons affected by illness, together with a summary of any workmen's accident compensation insurance or stating that there are no such legal requirements if that is the case, and any other legal obligations and remedies.</p>
<p>Annex 1.3: Additional Contractor Forms</p> <p>Attached Forms:</p> <p>Form JSSS/BSD - Bidder's Safety Declaration</p> <p>Form JSSS/SAR - Sample Accident Report</p>	<p>Annex 1.3: Additional Contractor Forms</p> <p>Attached Forms:</p> <p>Form JSSS/BSD - Bidder's Safety Declaration</p> <p>Form JSSS/SAR - Sample Accident Report</p>	<p>Annex 1.3: Additional Contractor Forms</p> <p>Attached Forms:</p> <p>Form JSSS/BSD - Bidder's Safety Declaration</p> <p>Form JSSS/SAR - Sample Accident Report</p>
<p>Form JSSS/BSD - Bidder's Safety Declaration</p> <p><i>[This form is to be Inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]</i></p> <p>I, [insert name and position of authorised signatory], being duly authorised by [insert name of Bidder/members of joint venture ("JV")] (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.</p> <p>The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.</p> <p>The Bidder hereby declares that he has given full and careful consideration and fully accepts the need and has made full allowance for the importation to the Country and the use upon the Works and subsequent re-export (JC74) in accordance with the Contract of all required Contractor's Equipment, PPE, Temporary Works and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.</p> <p>JC74: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standard? NK5/6: To MD, we would like to ask you to modify as commented.</p>	<p>Form JSSS/BSD - Bidder's Safety Declaration</p> <p><i>[This form is to be inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]</i></p> <p>I, [insert name and position of authorised signatory], being duly authorised by [insert name of Bidder/members of joint venture ("JV")] (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.</p> <p>The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.</p> <p>The Bidder hereby declares that after full investigation and research of resources within the Country, he has given full and careful consideration and fully accepts the need and has made full allowance for the importation, the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, Temporary Works, PPE and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.</p>	<p>Form JSSS/BSD - Bidder's Safety Declaration</p> <p><i>[This form is to be inserted in the Bidding Documents after the existing Form-ACK, with new page number, renumbering existing pages appropriately and inserting suitable reference in the Table of Forms]</i></p> <p>I, [insert name and position of authorised signatory], being duly authorised by [insert name of Bidder/members of joint venture ("JV")] (hereinafter referred to as the "Bidder") to execute this Form JSSS/BSD, hereby declare our commitment to comply with the health and safety requirements of the Contract.</p> <p>The Bidder declares, that if selected to undertake the Works, he will ensure that the Site is established and maintained as a healthy and safe workplace for the Contractor's Personnel, the Employer's Personnel and all other persons entitled to be thereon or that may be affected by operations thereby.</p> <p>The Bidder hereby declares that after full investigation and research of resources within the Country, he has given full and careful consideration and fully accepts the need and has made full allowance for the importation, the use upon the Works and subsequent re-export in accordance with the Contract of all required Contractor's Equipment, Temporary Works, PPE and all other safety resources necessary to maintain the highest achievable international level of health and safety upon the Works.</p>

コメントの追加【伊藤101】: Some equipment, PPE, TW etc. may be procured locally. Would you add some wording on possible local procurement as long as it respects international standard?

<p>The Bidder declares that he will mobilise for use upon the Works:</p> <ol style="list-style-type: none"> 1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and 2. New or recent Contractor's Equipment and Temporary Works (not more than five (5) years old); all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; <p>NK: As commented in 1.35.4, we consider that TW in 1. And 2. need to be clarified and TW in 2. may not be necessary to be not more than 5 years old. We want to discuss these more.</p> <p>Please refer to my recommendations and notes in 1.35 and advise me of your requirements.</p> <p>and that all of the above will be used correctly and for the purpose intended.</p> <p>The Bidder further declares that he shall:</p> <ol style="list-style-type: none"> 1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks. 2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability. 3. Fully inform workers about hazards; 4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand. 5. Keep accurate records of work-related injuries and illnesses. 6. Perform tests in the workplace, such as air sampling as required by the Project Safety Specification. 7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged. 8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned. 9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract. 10. Post injury and illness information and data where workers can see them. 11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately. 12. Not retaliate against workers for using their rights under the Laws of the Country. 	<p>The Bidder declares that he will mobilise for use upon the Works:</p> <ol style="list-style-type: none"> 1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and 2. New or up to date Contractor's Equipment and Temporary Works, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; <p>and that all of the above will be used correctly and for the purpose intended.</p> <p>The Bidder further declares that he shall:</p> <ol style="list-style-type: none"> 1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks. 2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability. 3. Fully inform workers about hazards. 4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand. 5. Keep accurate records of work-related injuries and illnesses. 6. Perform tests in the workplace, such as air sampling as required by the Project Safety Specification. 7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged. 8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned. 9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract. 10. Post injury and illness information and data where workers can see them. 11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately. 12. Not retaliate against workers for using their rights under the Laws of the Country. <p>The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by</p>	<p>The Bidder declares that he will mobilise for use upon the Works:</p> <ol style="list-style-type: none"> 1. New and up to date PPE and other safety equipment and Temporary Works of an international standard, suitable and fit for the purpose for which it is intended, in full working order, complete with all necessary spare parts and consumables, suitable and safe for use on the Works, all to meet with the consent of the Engineer and in sufficient quantities to allow for replacement in the case of being worn-out, lost or damaged, and 2. New or up to date Contractor's Equipment and Temporary Works, all suitable and fit for the purpose for which it is intended, in full working order, clean, non-polluting, complete with all necessary spare parts and consumables, suitable and safe for use on the Works; <p>and that all of the above will be used correctly and for the purpose intended.</p> <p>The Bidder further declares that he shall:</p> <ol style="list-style-type: none"> 1. Carry out regular and thorough safety inspections, find and correct any health and safety problems on the Works, primarily by trying to eliminate or reduce hazards through making feasible changes in working conditions rather than relying on PPE to eliminate or reduce risks. 2. Employ workers with appropriate skill, educational or vocational qualification, experience and capability. 3. Fully inform workers about hazards. 4. Provide health and safety training to all Contractor's Personnel, any subcontractors, suppliers and others for whom the Contractor is responsible, the Employer's Personnel and all other persons who are entitled to be on the Site, in a language and vocabulary they can understand. 5. Keep accurate records of work-related injuries and illnesses. 6. Perform tests in the workplace, such as air sampling as required by the Project Safety Specification. 7. Provide required new PPE at no cost to workers and ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged. 8. Assign only workers who, in consideration of health, physical condition and age are suited to the operations to which they are assigned. 9. Provide eyesight, hearing and mobility examinations and other medical tests required by the Contract. 10. Post injury and illness information and data where workers can see them. 11. Inform the Engineer and submit details of any accident as soon as practicable and in any event no later than twenty-four (24) hours after the occurrence and, in the case of a fatal accident shall inform the Engineer immediately. 12. Not retaliate against workers for using their rights under the Laws of the Country. <p>The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.</p>
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コメントの追加 [SS102]: Please delete "Project".

The requirements of this declaration shall apply fully to all of the Bidder's proposed Subcontractors, suppliers and specialists engaged by the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

Signed: _____

 (Bidder's Official Representative)

Signed: _____

 (Bidder's Proposed Health and Safety Officer at Site*)
 Or

 Bidder's Head Office Health and Safety Manager*)

Name: _____
 Name: _____

Date: _____
 Date: _____

(*Delete as applicable)

the Bidder on the Works, for whom the Bidder shall remain fully responsible.

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

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 (Bidder's Proposed Health and Safety Officer at Site*)
 Or

 Bidder's Head Office Health and Safety Manager*)

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 Name: _____

Date: _____
 Date: _____

(*Delete as applicable)

The Bidder also affirms that if the Bid is successful, the Health and Safety Officer at Site, named below and also included in Bidding Form, Form PER -1: Proposed Personnel, unless otherwise required by the Bidding Documents, shall be assigned from the Commencement Date, full-time upon the Site of the Works and shall not be replaced or substituted at any time except with the consent of the Engineer.

If the Bid is accepted the Bidder agrees that this Declaration together with all other documents comprised in the Bid Stage Safety Plan shall form a part of the Contract, at and from which time all references to "Bidder" shall be construed as references to "Contractor".

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 (Bidder's Official Representative)

Signed: _____

 (Bidder's Proposed Health and Safety Officer at Site*)
 Or

 Bidder's Head Office Health and Safety Manager*)

Name: _____
 Name: _____

Date: _____
 Date: _____

(*Delete as applicable)

Form JSSS/SAR – Sample Accident Report
[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality)	
(If casualty(ies) is(are) belonging to subcontractor.) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	

Form JSSS/SAR – Sample Accident Report
[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
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5) Employer: (name and nationality)	
6) Contractor: (name and nationality)	
(If casualty(ies) is(are) belonging to subcontractor.) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	

Form JSSS/SAR – Sample Accident Report
[The form is to be completed by the Contractor, submitted to the Engineer when applicable and in accordance with JSSS 1.25 [Measures at the Time Accidents Occur]

CONTRACT INFORMATION:	
1) Name of Project:	
2) Project Reference Number : (e.g. L/A No., G/A No.)	
3) Contract Number:	
4) Package Description:	
5) Employer: (name and nationality)	
6) Contractor: (name and nationality)	
(If casualty(ies) is(are) belonging to subcontractor.) Subcontractor: (name and nationality)	
7) Engineer: (name and nationality)	

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8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	
<i>(above to be inserted before all reports)</i>	
FIRST REPORT INFORMATION:	
1) Date and time of accident occurrence (local time):	
2) Date and time of first verbal report to Engineer:	
3) Exact location of accident occurrence:	
4) Brief background and apparent cause:	
5) (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
6) Physical damages to the Works, Site and any properties of the third parties	
7) Present medical status of casualty(ies):	
8) Present work status:	
9) List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
10) Accident Report Submission Date	
SUBSEQUENT REPORT INFORMATION (POST- INVESTIGATION):	
1) Cause(s) of the accident:	
2) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:	
3) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
4) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
5) Other Information:	
Report Prepared by: (name): _____ (sign): _____ Report Submission Date(s) _____	Contractor's Health and Safety Officer (HSO)
Time: _____	
Receipt acknowledged by: (name): _____ (sign): _____ Report Receipt Date(s) _____	Engineer
Time: _____	

(above to be inserted with detail and signatures at end of each report)

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8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	
<i>(above to be inserted before all reports)</i>	
FIRST REPORT INFORMATION:	
11) Date and time of accident occurrence (local time):	
12) Date and time of first verbal report to Engineer:	
13) Exact location of accident occurrence:	
14) _____ Brief background and apparent cause:	
15) _____ (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
16) _____ Physic al damages to the Works, Site and any properties of the third parties	
17) _____ Present medical status of casualty(ies):	
18) _____ Present work status:	
19) _____ List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
20) Accident Report Submission Date	
SUBSEQUENT REPORT INFORMATION (POST- INVESTIGATION):	
6) Cause(s) of the accident:	
7) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:	
8) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
9) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
10) Other Information:	
Report Prepared by: (name): _____ (sign): _____ Report Submission Date(s) _____	Contractor's Health and Safety Officer (HSO)
Time: _____	
Receipt acknowledged by: (name): _____ (sign): _____ Report Receipt Date(s) _____	Engineer

8) Press Report about the Accident (Name of Media, Date, and Copy of Report to be attached)	
<i>(above to be inserted before all reports)</i>	
FIRST REPORT INFORMATION:	
21) Date and time of accident occurrence (local time):	
22) Date and time of first verbal report to Engineer:	
23) Exact location of accident occurrence:	
24) _____ Brief background and apparent cause:	
25) _____ (i) Number of casualty(ies)/ (ii) Information of casualty(ies) (Nationality, Age, Sex, Position, Experience Year)/ (iii) Description of injuries incurred	
26) _____ Physic al damages to the Works, Site and any properties of the third parties	
27) _____ Present medical status of casualty(ies):	
28) _____ Present work status:	
29) _____ List attached information (e.g. Layout and sketch drawings, photographs, notes and report):	
30) Accident Report Submission Date	
SUBSEQUENT REPORT INFORMATION (POST- INVESTIGATION):	
11) Cause(s) of the accident:	
12) Counter-measures proposed by the Contractor to avoid recurrence of similar accidents and risks:	
13) Number of reported accident(s) occurred in the past one (1) year in the same Contract Package as the accident occurred:	
14) Number of reported near misses occurred in the past one (1) year in the same Contract Package as the accident occurred:	
15) Other Information:	
Report Prepared by: (name): _____ (sign): _____ Report Submission Date(s) _____	Contractor's Health and Safety Officer (HSO)
Time: _____	
Receipt acknowledged by: (name): _____ (sign): _____ Report Receipt Date(s) _____	Engineer

	Time:	Time:
	(above to be inserted with detail and signatures at end of each report)	(above to be inserted with detail and signatures at end of each report)
Annex 1.4: Figures and Illustrations (JC75) JC75: Delete if nothing else other than Fig A 1.4.1 NK5/6: Will delete as commented.		
Attached Documents: Fig A1.4.1 Incorporation of JSSS in Bid and Contract Documents (JC76) JC76: Move to User Guide 1.3.2 NK5/6: Will move as commented.		

コメントの追加 [伊藤103]: Delete if nothing else other than Fig A 1.4.1

コメントの追加 [伊藤104]: Move to User Guide 1.3.2

Safety measures are needed not only in the Site

We would like to have advice of NK/MID. The current draft JSSS says

A: the Site (very often) and

B: the Site and other places (if any) where the Contractor intends to execute the Works. (only in JSSS 1.7)

Safety measures are needed not only in the Site but other working areas the Contractor uses (but not designated as the Site in the Contract). In this sense, to be more correct, we believe most of "the Site" in JSSS now should be modified as B above

Therefore, it seems to us wise to add an interpretation of the "Site" in 1.2.2, for example:

"Unless otherwise stated in JSSS or the context is otherwise clear, "Site" used in JSSS shall be deemed to include any places other than the Site where the Contractor intends to execute the Works."

Disadvantage of this solution is that Site is defined in the GC and we may create confusion with this new interpretation.

Otherwise, we may repeat *"the Site and other places (if any) where the Contractor intends to execute the Works"* every time. But this is too long, so a bit awkward.

How do you think?

検討経緯書

2 General Safety Measures

JICA Standard Safety Specification Preparation Study
2.1 Establishment of Appropriate Work Environment (English R1)

2019.09.05 NK Prepared R1

Specification in Japanese (Provisional Final Version R1)	English Translation (Provisional Final Version R1)	Comment / Revised by M.D																																														
<p>2 安全措置一般</p> <p>2.1 適切な作業環境の整備 請負者は、良好な作業環境を整備・維持するため、以下を行わなければならない。</p> <p>2.1.1 粉じんが発生する場所での必要な措置 請負者は、土石、岩石、鉱物、セメント等の粉じんが発散するおそれのある場所では、発生源を湿潤な状態に保つ、発生源を覆う等、粉じんの発散を防止するための措置とともに、噴霧器、散水設備、換気装置の設置等、当該作業にかかる粉じんの発散を長時間暴露限界値以下まで減少させるための適切な措置を講じなければならない。 この長時間暴露限界値は、次の表に示す粉じんの数値を含め、英国の Health and Safety Executive (HSE) 発行の EH40/2005 Workplace exposure limits の Table 1: List of approved workplace exposure limits に規定の数値とする。</p> <table border="1"> <thead> <tr> <th rowspan="2">粉じんの種類</th> <th colspan="2">長時間暴露限界値 Long-term exposure limit (8-hr time-weighted average reference period)</th> </tr> <tr> <th>吸入性 (Respirable)</th> <th>吸引性 (Inhalable)</th> </tr> </thead> <tbody> <tr> <td>吸入性結晶シリカ(*)</td> <td>0.1 mg/m3</td> <td>-</td> </tr> <tr> <td>ポルトランドセメント(*)</td> <td>4 mg/m3</td> <td>10 mg/m3</td> </tr> </tbody> </table> <p>有効な粉じんの低減の措置を図ることが難しく、短時間・暫定的な作業の場合に限り、保護具の活用を認める。この場合においては、次表の規格に適合する保護具又は規格に従い選定した保護具を使用させなければならない。</p> <table border="1"> <thead> <tr> <th></th> <th>規格番号</th> <th>規格名</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>JIS T 8151 JIS T 8157</td> <td>防じんマスク/Particulate respirator 電動ファン付き呼吸用保護具/ Powered air purifying respirator</td> </tr> <tr> <td>2</td> <td>BS EN 149: 2001+A1: 2009 2) BS EN 14593- 1: 2018</td> <td>1) Respiratory protective devices. Filtering half masks to protect against particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full face mask.</td> </tr> <tr> <td>3</td> <td>ANSI Z88.2-2015</td> <td>Practices for Respiratory Protection</td> </tr> </tbody> </table>	粉じんの種類	長時間暴露限界値 Long-term exposure limit (8-hr time-weighted average reference period)		吸入性 (Respirable)	吸引性 (Inhalable)	吸入性結晶シリカ(*)	0.1 mg/m3	-	ポルトランドセメント(*)	4 mg/m3	10 mg/m3		規格番号	規格名	1	JIS T 8151 JIS T 8157	防じんマスク/Particulate respirator 電動ファン付き呼吸用保護具/ Powered air purifying respirator	2	BS EN 149: 2001+A1: 2009 2) BS EN 14593- 1: 2018	1) Respiratory protective devices. Filtering half masks to protect against particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full face mask.	3	ANSI Z88.2-2015	Practices for Respiratory Protection	<p>2 General Safety Measures</p> <p>2.1 Establishment of Appropriate Work Environment The Contractor shall perform the followings to establish and maintain appropriate work environment.</p> <p>2.1.1 Necessary Measures at Places where Dust is Generated At work places where soils, rocks, minerals, cement, etc., may emit dust, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prevent dust emission, such as keeping the source moist and covering the source. (2) In addition, take proper measures such as installation of spraying, watering and/or ventilation equipment to reduce the dust emission to below the long-term exposure limit. <p>The long-term exposure limits shall be the values specified in Table 1: List of approved workplace exposure limits of EH40 / 2005 Workplace exposure limits issued by the UK Health and Safety Executive (HSE), including the dust values shown in the following table:</p> <table border="1"> <thead> <tr> <th rowspan="2">Types of Dust</th> <th colspan="2">Long-term Exposure Limit (8-hr Time-weighted Average Reference Period)</th> </tr> <tr> <th>Respirable</th> <th>Inhalable</th> </tr> </thead> <tbody> <tr> <td>Respirable crystalline silica</td> <td>0.1 mg/m3</td> <td>-</td> </tr> <tr> <td>Portland Cement</td> <td>4 mg/m3</td> <td>10 mg/m3</td> </tr> </tbody> </table> <p>The use of personal protective equipment shall be allowed when it is difficult to take effective measures to reduce dust, in addition, the work is limited to short-term and temporary work. In this case, personal protective equipment conforming to the standards in the following table or those selected in accordance with the standards shall be used.</p> <table border="1"> <thead> <tr> <th></th> <th>Standard</th> <th>Title of Standard</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>JIS T 8151 JIS T 8157</td> <td>Particulate respirator Powered air purifying respirator</td> </tr> <tr> <td>2</td> <td>1)BS EN 149: 2001+A1: 2009 2) BS EN 14593- 1: 2018</td> <td>1) Respiratory protective devices. Filtering half masks to protect against particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. 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<p>2.1.1 換気の悪い場所における必要な措置</p> <p>請負者は、自然換気が不十分な場所では、内燃機関を有する機械を使用してはならない。ただし、やむを得ず内燃機関を使用するときは、当該内燃機関の排気ガスによる健康障害を防止するため、十分な換気を行わなければならない。</p>	<p>2.1.2 Necessary Measures at Work Place in Poor Ventilation</p> <p>The Contractor shall not use equipment with an internal combustion engine in a place where natural ventilation is insufficient. However, in case that use of an internal combustion engine is inevitable, the Contractor shall take adequate ventilation measures to prevent health problems caused by the exhaust gas</p>	
<p>2.1.3 強烈な騒音を発生する場所等での必要な措置</p> <p>請負者は、90dB以上の騒音(強烈な騒音という)を発生する作業場所においては、請負者の要員の騒音障害防止のため次の措置を講じなければならない。</p> <p>(1) OSHA Subpart D—Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.の規定に従い、作業場所での騒音の程度と騒音の暴露時間に対応して請負者の要員に、本仕様書 2.10.5(3)(d)[防音保護具]に規定の保護具を使用させること。</p> <p>(2) 当該作業場所では耳栓その他の騒音障害防止用の保護具を使用しなければならない旨を、請負者の要員が容易に認知できる見やすい場所に掲示すること。</p>	<p>2.1.3 Necessary Measures at Work Place Generating Intense Noise</p> <p>To prevent noise damage to the Contractor’s Personnel at work places that generate 90 dB or more of noise (referred to as intense noise), the Contractor shall:</p> <p>(1) have the Contractor’s Personnel use protective equipment specified in 2.9.5 (3)(d) [Hearing Protective Equipment] of JSSS in accordance with the provisions of OSHA Subpart D—Occupational Health and Environmental Controls § 1926.52 Occupational noise exposure.</p> <p>(2) post on the work place where the Contractor’s Personnel can easily recognize that earplugs and other protective equipment for preventing noise damage shall be used at the work place concerned.</p>	
<p>2.1.4 閉鎖空間における安全措置</p> <p>各種ビット、タンク、水槽、マンホール、ダクト、PC 箱桁、下水道等の狭い作業空間あるいは小さい出入口のみを有する閉鎖空間(以下本節では「閉鎖空間」という。)における作業において、請負者は請負者の要員の酸素欠乏や有毒ガス等に対する安全確保のために、下記の措置を講じなければならない。</p> <p>(1) 酸素濃度、硫化水素濃度、その他必要な作業環境項目について測定を行うこと。作業環境測定は作業前に毎日実施すること。</p> <p>(2) 上記(1)の作業環境測定の結果、2.1.6 (2)に規定の制限値に抵触する場合は、換気による作業環境を改善し、これを維持すること</p> <p>(3) 作業空間内には、入場許可を与えた要員以外は立ち入らせないこと。</p> <p>(4) 作業空間外に監視員を配置し、作業空間内の要員の安全を常時監視させること。また、作業空間内で作業する要員の中から連絡係を任命し、外部の監視員との交信方法を整備すること。</p> <p>(5) 緊急時の救出体制を確立し、救出活動の手順を作成すること。救出活動に用いられる空気呼吸器等の呼吸用保護具を常備しておくこと。異常が発生し救出が必要な場合は、救出の際の二次災害を防ぐため、指示された者以外は救出活動に従事させないこと。</p> <p>(6) 当該閉鎖空間において作業を行う場合に必要な安全措置について、当該作業員に教育訓練を行うこと。</p> <p>(7) 当該作業にかかる作業計画書・安全衛生詳細計画書に、上記(1)から(6)の内容を含めること。</p>	<p>2.1.4 Safety Measures in Confined Spaces</p> <p>In works in confined spaces such as pits, tanks, water tanks, manholes, ducts, prestressed concrete box girders, sewers, etc. or closed spaces with only small entrances (hereinafter referred to as “confined spaces” in this section), the Contractor shall take the following measures to ensure the safety of workers against oxygen deficiency and toxic gases.</p> <p>(1) Measure concentration of oxygen, hydrogen sulfide concentration, and other items for necessary work environment before starting each work every day.</p> <p>(2) Improve and maintain the work environment by ventilation when the results of the work environment measurement in (1) above are within the limits specified in 2.1.6 (2).</p> <p>(3) Prohibit any personnel to enter other than who are authorized to enter.</p> <p>(4) Set a spotter outside the workspace to constantly monitor the safety of personnel in the confined space. In addition, a liaison shall be appointed among the personnel working in the workspace and a method for communicating with external spotter shall be established.</p> <p>(5) Establish an emergency rescue system and create a rescue operation procedure. Prepare respiratory protective equipment such as a respirator for rescue operations. When an accident occurs and rescue is required, prohibit any personnel to engage in rescue activities other than those instructed to do so in order to prevent secondary accident.</p>	

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	<p>(6) Educate and train concerned workers on the safety measures for working in confined spaces.</p> <p>(7) Include the contents of (1) to (6) above in the method statement and the particular health and safety plan for the work concerned.</p>	
<p>2.1.5 高温多湿な作業環境下での必要な措置 請負者は、高温多湿な作業環境での作業員の健康障害の防止のため、下記の措置を講じなければならない。</p> <p>(1) 作業環境の改善</p> <p>(a) 屋外の高温多湿な作業場所においては、直射日光並びに周囲の壁面及び地面からの照り返しを遮ることができる簡易な施設を適所に設けること。</p> <p>(b) 屋内の作業場所では、熱源からの熱に対して遮蔽物を設けること、及び適度な通風を確保すること、又は冷房設備を設けること。</p> <p>(c) 作業場所には飲料水及び塩分補給を可能にするものを備え付けること。</p> <p>(d) 体調不良を起こした者を回復させることを目的として、作業場所の近隣に冷房設備を備えた休憩所又は日陰等の涼しい休憩所を設けること。かかる施設には体調不良者が横臥できるような設備を設けること。</p> <p>(2) 作業上の措置</p> <p>(a) 作業の休止および休憩時間を確保し、連続する作業時間を短縮すること。</p> <p>(b) 必要に応じて計画的に暑さへの順化期間を設けること。</p> <p>(c) 作業前後及び作業中の水分、塩分の摂取及び透湿性や通気性の良い服装の着用等を指導し、適宜巡視して、不適切な状況が認められたときは直ちに是正する等の適切な措置を講ずること。</p> <p>(d) 作業中に健康状態の異常が認められた要員については、休ませる等の必要な措置をとること。</p>	<p>2.1.5 Necessary Measures under High Temperature and High Humidity Working Environment For preventing workers' health hazards in hot and humid working environment, the Contractor shall take the following measures:</p> <p>(1) Improvement of work environment</p> <p>(a) Provide simple facilities properly which can intercept direct sun light and reflection from the surrounding wall and ground in outdoor hot and humid work places.</p> <p>(b) Provide a shield for heat from the heat source, and adequate ventilation or air conditioning in the indoor work places,</p> <p>(c) Provide drinking water and supplement that allow salt replenishment at work place, and</p> <p>(d) Provide a rest station with air conditioning or a resting place with shade near the work place. Such station or place shall be equipped with facilities on which personnel feeling unwell can lie down.</p> <p>(2) Measures for workers</p> <p>(a) Provide work breaks and reduce continuous work time,</p> <p>(b) Plan to establish acclimation period to heat,</p> <p>(c) Instruct workers to take in water and salt before, during and after work and to wear moisture-permeable and well-ventilated clothes, and conduct appropriate patrols to check work environment, and when any inappropriate situation is found, take proper measures to correct the situation, and</p> <p>(d) Monitor the health status of the workers before and during the work, and take necessary measures such as taking a rest when any abnormalities are observed.</p>	
<p>2.1.6 作業環境の把握</p> <p>(1) 請負者は、適切な作業環境を確保するため、下記の項目について、必要に応じ随時モニタリングを実施しなければならない。</p> <p>(a) 土石、岩石、鉱物、セメント等の粉じんが、著しく発生する作業場での粉じん</p> <p>(b) 強烈な騒音を発生する作業場所における騒音</p>	<p>2.1.6 Monitoring of Work Environment</p> <p>(1) The Contractor shall monitor the following items as needed to ensure an appropriate working environment:</p> <p>(a) Dust at work places where dust of such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated remarkably</p> <p>(b) Noise at work places that generate intense noise</p>	

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<p>(c) 坑内及び地下室、地下掘削等の地下空間における作業場の通気量、気温、炭酸ガス、酸素濃度又は硫化水素濃度</p> <p>(d) 閉鎖空間での、酸素濃度又は硫化水素濃度</p> <p>(e) 高温多湿な作業場所における温度及び湿度</p> <p>(f) 作業場所及び通路における照度</p> <p>なお、当該国の法律に定められた環境調査及び本契約で別途に定めがある環境影響モニタリングとは別に、上記のモニタリングを実施しなければならない。</p> <p>(2) 以下(a)~(d)が該当する場合は、本仕様書 2.1.4[閉鎖空間における安全措置]及び 2.3[立入禁止の措置]における求められる措置を取らなければならない。</p> <p>(a) 酸素濃度:19.5%未満または23.5%を超える場合</p> <p>(b) 硫化水素濃度:10ppmを超える場合</p> <p>(c) 可燃性のガス、蒸気の濃度:可燃下限値の10%を超える場合</p> <p>(d) 炭酸ガス(二酸化炭素)濃度:0.5%を超える場合</p>	<p>(c) Ventilation volume, temperature and concentration of carbon dioxide, oxygen and hydrogen sulfide at work place in a tunnel</p> <p>(d) Concentration of oxygen and hydrogen sulfide in a confined space</p> <p>(e) Temperature and humidity at work places under high temperature and humidity</p> <p>(f) Illuminance at work place and passage</p> <p>The above monitoring shall be carried out separately from the environmental surveys stipulated in the Laws of the Country and the environmental impact monitoring stipulated in the Contract.</p> <p>(2) In any case of the following (a) to (d), the Contractor shall take required measures specified in JSSS 2.1.4 [Safety Measures in Closed Space] and 2.3 [Prohibition of Entry].</p> <p>(a) Oxygen concentration: below 19.5% or above 23.5 %</p> <p>(b) Hydrogen sulfide: in excess of 10 ppm</p> <p>(c) Combustible gas or vapor concentration: in excess of 10% of the lower limit of flammability</p> <p>(d) Carbon dioxide concentration: in excess of 0.5%</p>	

JICA Standard Safety Specification Preparation Study
2.2 Prevention of Danger of Third Parties around Construction Site (English R1)

2019.7.18 Study Team Translation (R0)
2019.9.6 Study Team Translation (R1)

Specification in Japanese (Provisional Final Draft R1)	English Translation (Provisional Final Draft R1)	Comment / Revised by M. D
<p>2 安全措置一般</p> <p>2.2 工事現場周辺の危害防止 請負者は、工事現場周辺における第三者への危害防止のために、下記の措置を講じなければならない。</p> <p>2.2.1 工事区域の立入防止施設 請負者は第三者立入禁止の場所、工事現場の周囲及び危険箇所、柵・仮囲い等の立入り防止施設を設置することにより、請負者の要員及び第三者に対して工事区域を明確にするため、以下の措置を取らなければならない。</p> <p>(1) 立入防止施設は、損傷・腐食等のない材料のものとし、第三者(特に子供)が容易に侵入できないような構造とすること。</p> <p>(2) 立入防止施設、工事看板、照明器具等の保守管理を行うこと。</p> <p>(3) 立入防止施設に設けた出入口は、施錠できるようにすること。</p> <p>(4) 道路に近接して掘削等により開口している箇所がある場合には、蓋をするか防護柵を設置して転落防止措置を講じること。</p> <p>(5) 柵・仮囲いの高さ、長さ及び仕様は、本仕様書 Annex XX の規定に従うこと。</p>	<p>2 General Safety Measures</p> <p>2.2 Prevention of Danger around Construction Site In order to prevent the danger to the third parties around the construction site, the Contractor shall take the following measures:</p> <p>2.2.1 Entry Prevention Facility of Third Parties' into Construction Area For clarifying the construction area to the Contractor's Personnel and the third parties by installing entry prevention facilities with fences and temporary enclosures at places such as entry prohibited areas to the third parties, perimeter of the site and hazardous areas, the Contractor shall:</p> <p>(1) Use materials free from damage or corrosion for entry prevention facilities and construct them so that third parties (especially children) cannot enter easily,</p> <p>(2) Maintain entry prevention facilities and construction signs, lighting equipment, etc.,</p> <p>(3) Make the entrance of the entry preventing facilities lockable,</p> <p>(4) Take fall prevention measures for pits or holes created by the Works in the vicinity of the road by covering or providing a protective fence, and</p> <p>(5) The height, length, and specifications of the fence and/or temporary enclosure shall conform to the provisions of Annex XX of this Specification.</p>	
<p>2.2.2 道路占用時の措置 請負者は、工事のために道路を占用する場合には、発注者による関係当局との事前調整結果に基づき、当該道路での安全で円滑な交通を確保するため、次の措置を講じなければならない。</p> <p>(1) 道路占用に先立ち、道路占用計画を作成し関係当局から必要な許可をとること。</p> <p>(2) 道路の交通止め、もしくは通行制限が必要な場合には、実施前に関係当局の承認と必要な許可を得ること。</p> <p>(3) 道路占用の全期間を通じて、道路での安全で円滑な交通を、妨げないように配慮すること。</p> <p>(4) 看板、標識、バリケードその他立入防止施設は、使用が許可されたものを設置し、これら設備の点検、保守及び撤去を行うこと。</p> <p>(5) 夜間照明、保安灯は、常に点検を行い、保守管理を行うこと。</p>	<p>2.2.2 Measures for Road Occupation When the Contractor occupies and uses a road for construction purpose, in order to ensure safe and smooth traffic on the road, the Contractor shall take the following measures, based on the prior coordination with the relevant authorities by the Employer,</p> <p>(1) Prepare, prior to road occupation, a road occupation plan and submit it to the relevant authorities, and obtain necessary permits,</p> <p>(2) Obtain the approval of the relevant authorities and the necessary permits before implementation when road traffic is stopped or traffic restrictions are required,</p> <p>(3) Take measures not to disturb safe and smooth traffic on the road during the entire road occupation period.</p> <p>(4) Install signboards, signs, barricades and other entry prevention facilities permitted for use by the Country's traffic rules, and perform inspection, maintenance and removal of these facilities,</p>	

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	(5) Always inspect and perform maintenance for night lighting and security lights.	
<p>2.2.3 看板・標識の整備</p> <p>請負者は、工事現場周辺に必要な情報を明示するために次の措置を講じなければならない。</p> <p>(1) 道路上に設置する工事看板、迂回路案内板等の各種標識類は、当該国の標準のものを使用し、所定の場所に交通の支障とならないよう設置し、振動や風等で壊れたり倒れたりしないようなものとし、しっかり固定すること。</p> <p>(6) 各種標識類は、運転者及び歩行者の見やすい場所に設置すること。また、夜間において遠方から確認し得るよう照明又は反射装置を設置すること。</p> <p>(7) 各種標識類は、修繕、塗装、清掃等の保守管理を常時行う。</p>	<p>2.2.3 Installation of Signboards and Signs</p> <p>For disseminating the necessary information around the construction site, the Contractor shall:</p> <p>(1) Use standard signs of the Country such as construction signs, detour guide boards, etc. set on roads, and install them in the predetermined places so as not to disturb traffic, and fix them firmly so as not to break or fall by vibration or wind,</p> <p>(2) Install necessary signs at locations for drivers and pedestrians to see easily. In addition, those signs shall be provided with lighting or reflecting plate so that they can be seen from a distance at night, and</p> <p>(3) Perform maintenance of signs constantly such as repair, painting and cleaning.</p>	
<p>2.2.4 工事現場出入口付近での交通事故防止</p> <p>請負者は、工事現場出入口付近での交通事故防止のために、次の措置を講じなければならない。</p> <p>(1) 工事車両の出入口には、通行車両等が接近時に出入口があることが事前に認識できる距離に警告看板を設けるとともに、出入口には、交通誘導員を適切に配置し、工事車両とともに一般車両及び歩行者に対しても必要な誘導を行うこと。</p> <p>(1) (2) 出入口では、歩行者及び一般交通を優先すること。</p>	<p>2.2.4 Prevention of Traffic Accident near the Construction Site Entrance</p> <p>For preventing traffic accidents near and at the construction site entrance, the Contractor shall:</p> <p>(1) Provide a warning signboard at the entrance which can inform the drivers of passing vehicles in advance that the entrance exists, and also provide a traffic flagger for necessary guidance not only for construction vehicles but also passing vehicles and pedestrians,</p> <p>(2) Give priority to pedestrians and general traffic at the entrance.</p>	
<p>2.2.5 地域住民とのコミュニケーション</p> <p>請負者は、工事現場周辺の地域住民とのコミュニケーションを図るために、次の措置を講じなければならない。</p> <p>(1) 工事着手前に、周辺住民への工事概要の周知に関して発注者に協力すること</p> <p>(2) 工事場所が学校施設近辺にある場合には、請負者は、本契約で別途定めるところに従い、近隣住民に対して交通安全にかかる啓蒙活動を行うとともに、請負者の要員に対して特に登下校時の工事車両の通行に関するルール・留意事項を周知すること。</p> <p>(3) 工事中に周辺住民等から、請負者に対する苦情又は要望があったときは、請負者はエンジニアに直ちに報告すること</p>	<p>2.2.5 Communication with Local Community</p> <p>In order to improve communications with the local community around the construction site, the Contractor shall:</p> <p>(1) Cooperate with the Employer for dissemination of the construction outline to nearby community before starting construction,</p> <p>(2) When the construction site is in the vicinity of schools, conduct traffic safety awareness activities for the local community as required in accordance with the requirement separately provide in the Contract and also disseminate to the Contractor's Personnel the rules and precautions regarding the passage of construction vehicles at the time of children's going to and from schools in particular, and</p> <p>(3) Report immediately to the Engineer when any complaints or requests are expressed by the local community to the Contractor.</p>	

JICA Standard Safety Specification Preparation Study
2.2 Prevention of Third Parties from Danger (English R1)

2019.09.07 調査団作成

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<p>2. 安全措置一般</p> <p>2.2 工事現場周辺の危害防止</p> <p>2.2.1 工事区域の立入防止施設</p> <p>2.2.2 道路占用時の措置</p> <p>2.2.3 看板・標識の整備</p> <p>2.2.4 工事現場出入口付近での交通事故防止</p> <p>2.2.5 地域住民とのコミュニケーション</p>	<p>2 General Safety Measures</p> <p>2.2 Security of the Site</p> <p>2.2.1 Preventing Unauthorized Entry to the Site</p> <p>2.2.2 Working in Public Road and Highways</p> <p>2.2.3 Temporary Road Signs</p> <p>2.2.4 Traffic Accident Prevention at Site Entrance</p> <p>2.2.5 Community Relations</p>	<p>2 General Safety Measures</p> <p>2.2 Prevention of Danger of Third Parties around Construction Site</p> <p>2.2.1 Preventing Entry of Third Parties into Construction Area</p> <p>2.2.2 Measures for Road Occupation</p> <p>2.2.3 Temporary Road Signs</p> <p>2.2.4 Traffic Accident Prevention at Site Entrance</p> <p>2.2.5 Community Relations</p>
<p>2 安全措置一般</p> <p>2.2 工事現場周辺の危害防止</p> <p>請負者は、工事現場周辺における第三者への危害防止のために、下記の措置を講じなければならない。</p>	<p>2 General Safety Measures</p> <p>2.2 Security of the Site</p> <p><i>NK is this Section really necessary? Parts are usually covered and in more detail in the Specifications for particular projects with other associated conditions. Also, each project will have different requirements e.g. for fencing and barriers which require different specification and drawings. Some projects also may be inside existing fences etc. or have different security arrangements.</i></p> <p><i>This will tend to confuse.</i></p> <p><i>Also, the Section covers widely differing subjects, that would normally be treated separately.</i></p> <p><i>The subjects in the main are also dealt with by basic obligations of the Contract Conditions and some conflict is likely.</i></p> <p><i>It has been described as "Prevention of Danger around Construction Site" that is not explicit. We are not sure of a greatly better description at this time so have labelled it Miscellaneous Requirements but this is not satisfactory.</i></p> <p><i>MD- The purpose of this section is to stipulate the importance of securing safety of the third parties around the Site. The title of 2.2 may have been inappropriate. So, we would like to change it to "Prevention of Danger of Third Parties around the Site" to make the purpose clearer.</i></p>	<p>2 General Safety Measures</p> <p>2.2 Prevention of Danger around Construction Site</p> <p>In order to prevent the danger to the third parties around the construction site, the Contractor shall take the following measures.</p>
<p>2.2.1 工事区域の立入防止施設</p> <p>請負者は第三者立入禁止の場所、工事現場の周囲及び危険箇所に、柵・仮囲い等の立入り防止施設を設置することにより、請負者の要員及び第三者に対して工事区域を明確にするため、以下の措置を取らなければならない。</p> <p>(1) 立入防止施設は、損傷・腐食等のない材料のものとし、第三者(特に子供)が容易に侵入できないような構造とすること。</p> <p>(2) 立入防止施設、工事看板、照明器具等の保守管理を行うこと。</p> <p>(3) 立入防止施設に設けた出入口は、施錠できるようにすること。</p>	<p>2.2.1 Preventing Unauthorized Entry to the Site</p> <p>(1) Further to the requirements of GC4.2 and unless otherwise stated in the Contract the Contractor shall:</p> <p><i>MD- GC4.2 is "Performance Security" in the FIDIC that I have?</i></p> <p>(a) Enclose the perimeter of the Site and all office areas, working areas and facilities within the Site with secure temporary fencing of materials and design to be approved by the Engineer;</p>	<p>2.2.1 Entry Prevention Facility of Third Parties' into Construction Area</p> <p>For clarifying the construction area to the Contractor's Personnel and the third parties by installing entry prevention facilities with fences and temporary enclosures at places such as entry prohibited areas to the third parties, perimeter of the site and hazardous areas, the Contractor shall:</p> <p>(1) Use materials free from damage or corrosion for entry prevention facilities and construct them so that third parties (especially children) cannot enter easily,</p>

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<p>(4) 道路に近接して掘削等により開口している箇所がある場合には、蓋をするか防護柵を設置して転落防止措置を講じること。</p> <p>(5) 柵・仮囲いの高さ、長さ及び仕様は、本仕様書 Annex X の規定に従うこと。</p>	<p>(b) Maintain all such fencing in good condition, throughout the Time for Completion, remove on Completion and reinstate all affected areas;</p> <p>(c) Provide secure entry points with barriers and provide 24/7 (MD- What is this?) security personnel to monitor and control all authorised personnel and to keep all unauthorised persons off the Site and from restricted or hazardous areas within the Site.</p> <p><i>NK- add any further requirements for site security guards etc.</i></p> <p>(2) All temporary fencing and entry points shall be constructed with <u>new materials</u>, of sturdy construction fit for purpose, free from damage or corrosion and adequate to prevent access, accidents or injuries to unauthorised persons (especially children);</p> <p><i>MD-It is not necessary to restrict to brand-new.</i></p> <p>(3) Provide and maintain secure entry points, erect construction signs and hoardings and install lighting equipment;</p> <p><i>NK- Describe required perimeter and internal lighting, generators, power supply payment etc. but note this is not a standard requirement.</i></p> <p>(4) Provide guardhouse with security guard, counterweighted or automated boom barrier and lockable gates;</p> <p><i>MD- The requirement that we are intending with this provision is only "the gate must be lockable". It is too much to require guardhouse or automated boom barrier etc.</i></p> <p>(5) Provide ID system to permit authorized entry and prohibit unauthorized entry;</p> <p><i>NK- Develop specification of required ID system but note that this may not be a standard requirement</i></p> <p><i>MD- We don't think it necessary to introduce ID system so far considering the situation of those countries concerned.</i></p> <p>(6) Provide covers, such as steel plate or enclose with secure fencing to prevent falls into <u>any excavations/holes in access roads or other roads</u> for which the Contractor is responsible;</p> <p><i>NK- Is the correct place for this requirement?</i></p> <p><i>MD- The places that required to secure safety (of the third parties) in this clause is limited to pits or excavated holes in the vicinity of the road.</i></p> <p>(7) Make any temporary enclosure using wire mesh where visibility for vehicles is necessary; and</p> <p>(8) Temporary fences and enclosures shall be of the following specifications:</p>	<p>(2) Maintain entry prevention facilities and construction signs, lighting equipment, etc.,</p> <p>(3) Make the entrance of the entry preventing facilities lockable,</p> <p>(4) Take fall prevention measures for pits or holes created by the Works in the vicinity of the road by covering or providing a protective fence, and</p> <p>(5) The height, length, and specifications of the fence and/or temporary enclosure shall conform to the provisions of Annex XX of this Specification.</p>

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	<p>(a) The height of temporary fences shall be 1.2m or more (<i>NK not usually sufficient for Site perimeter fence?</i>), and the posts shall not be easily moved or broken;</p> <p><i>NK- Concrete posts, barbed wire, etc.? NK- Please review for adequacy.</i></p>  <p><i>MD- An example of the temporary fence is shown at right. It is for preventing the third parties to enter certain prohibit area, not all Site area.</i></p> <p>(b) The height of movable fences and barriers shall be 0.8 m to 1.0 m, and the length shall be 1.0 m to 1.5 m; and</p> <p><i>NK- Where are the moveable fences and for what purpose? What does length refer to?</i></p> <p><i>MD- An example of the movable fence is shown at right.</i></p>  <p>(c) The height of temporary enclosures shall be 1.8m or more, and posts, horizontal members and braces of sufficient strength and durability shall be installed.</p> <p><i>NK- What and where are temporary enclosures?</i></p>  <p><i>MD- An example of the temporary enclosure is shown at right.</i></p> <p><i>We decided to delete detail specifications of the temporary fence and enclosure from this clause, instead to specify to fill out the form prepared in Annex as stated in (5).</i></p> <p><u>MD- Please, check and correct English of 2.2.1 at the right column.</u></p> <p><u>Your suggestion on this clause seems to be a little off the line from what we are intending.</u></p> <p><u>The English translation is a literal translation, so please try to understand what we intend as it is. (We will discuss this further when you come to Japan.)</u></p>	
<p>2.2.2 道路占用時の措置</p> <p>請負者は、工事のために道路を占用する場合には、発注者による関係当局との事前調整結果に基づき、当該道路での安全で円滑な交通を確保するため、次の措置を講じなければならない。</p> <p>(1) 道路占用に先立ち、道路占用計画を作成し関係当局から必要な許可をとること。</p> <p>(2) 道路の交通止め、もしくは通行制限が必要な場合には、実施前に関係当局の承認と必要な許可を得ること。</p> <p>(3) 道路占用の全期間を通じて、道路での安全で円滑な交通を、妨げないように配慮すること。</p>	<p>2.2.2 Working in Public Roads and Highways</p> <p><i>NK- Should the following be included here as it is an entirely separate subject that can involve complex legal responsibilities and obligations for the employer (which are frequently abused). What is the connection with Safety??</i></p> <p><i>Needs to be considered together with GC 4.13, 4.14, 4.15</i></p> <p>When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, then prior to commencement of any such work the Contractor shall hold prior coordination with the relevant authorities through the Employer, in order to ensure safe and smooth traffic flow on the road and the Contractor shall:</p> <p><i>MNK- How can the Contractor do this at Bid stage for example when he has no such</i></p>	<p>2.2.2 Measures for Road Occupation</p> <p>When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work, based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:</p> <p>(1) Prepare a road usage plan and submit it to the relevant authorities, and obtain necessary permits, prior to road use;</p> <p>(2) Obtain the approval of the relevant authorities and obtain the necessary permits before any road closure, diversion or other traffic restrictions are applied;</p>

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<p>(4) 看板、標識、バリケードその他立入防止施設は、使用が許可されたものを設置し、これら設備の点検、保守及び撤去を行うこと。</p> <p>(5) 夜間照明、保安灯等は、常に点検を行い、保守管理を行うこと。</p>	<p><i>authority?</i></p> <p><i>This assumes that the employer has organised all before Bidding or it is with specialist contractors and has little to do with safety.</i></p> <p><i>It is also not a standard requirement, circumstances and obligations will differ for each project.</i></p> <p><i>MD- While the construction work proceeds, there would be some cases that require road occupation for the certain work which was not possible to predict at Bid stage. Of course, road occupation works that can be predicted in the preparation of Bidding document, it is responsibility of the Employer to obtain coordination of relevant authorities prior to Bid.</i></p> <ol style="list-style-type: none"> (1) Prepare a road usage plan and submit it to the relevant authorities, and obtain necessary permits, prior to road use; (2) Obtain the approval of the relevant authorities and obtain the necessary permits before any road closure, diversion or other traffic restrictions are applied; (3) Take necessary measures to limit any restrictions to safe and smooth traffic flow on the road during the entire road usage period; <p><i>NK- In general the work will not be approved if the contractor does not do this.</i></p> <p><i>MD- Understood. However, obtaining permission in due process does not necessary mean that the Contractor will take every measure to secure safe and smooth traffic.</i></p> <ol style="list-style-type: none"> (4) Install signboards, signs, barricades and other protective facilities which are permitted for use by the Country's traffic rules and regulations and install, inspect, maintain and remove these facilities as and when necessary; (5) Use direction and diversion signs, generators and transformers, warning lights, illumination for pedestrians, temporary signals, signalling devices or traffic flaggers for traffic control that meet the requirements of the Country's traffic rules and regulations and always inspect and maintain night lighting, security lights, guide lights and the like. <p><i>NK- The above has little to do with General Safety and should be a separate subject, particular for each project.</i></p> <p><i>MD- As mentioned at the beginning, the purpose of this clause is to secure safety of the third parties around the Site. Safety of road traffic, pedestrian and neighboring inhabitant is, needless to say, very important for any kind of project.</i></p>	<ol style="list-style-type: none"> (3) Take necessary measures to limit any restrictions to safe and smooth traffic flow on the road during the entire road usage period; (4) Install signboards, signs, barricades and other protective facilities which are permitted for use by the Country's traffic rules and regulations and inspect, maintain and remove these facilities as and when necessary; (5) Always inspect and maintain night lighting, security lights and the like
<p>2.2.3 看板・標識の整備</p> <p>請負者は、工事現場周辺に必要な情報を明示するために次の措置を講じなければならない。</p>	<p>2.2.3 Temporary Road Signs</p> <p>For disseminating necessary information on roads adjacent to and in the Site, the Contractor shall:</p>	<p>2.2.3 Temporary Road Signs</p> <p>For disseminating necessary information on roads adjacent to the Site, the Contractor shall:</p>

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<p>(1) 道路上に設置する工事看板、迂回路案内板等の各種標識類は、当該国の標準のものを使用し、所定の場所に交通の支障とならないよう設置し、振動や風等で壊れたり倒れたりしないようなものと、しっかり固定すること。</p> <p>(2) 各種標識類は、運転者及び歩行者の見やすい場所に設置すること。また、夜間において遠方から確認し得るよう照明又は反射装置を設置すること。</p> <p>(3) 各種標識類は、修繕、塗装、清掃等の保守管理を常時行うこと。</p>	<p>(1) Provide standard road signs in the same colours and format as those used by the road authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs.</p> <p>(2) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike.</p> <p>(3) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(4) Maintain the various signs regularly, including repairing, painting and cleaning, and ensuring that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p>	<p>(1) Provide standard road signs in the same colours and format as those used by the road authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs.</p> <p>(2) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike.</p> <p>(3) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(4) Maintain the various signs regularly, including repairing, painting and cleaning.</p>
<p>2.2.4 工事現場出入口付近での交通事故防止 請負者は、工事現場出入口付近での交通事故防止のために、次の措置を講じなければならない。</p> <p>(1) 工事車両の出入口には、通行車両等が接近時に出入口があることが事前に認識できる距離に警告看板を設けるとともに、出入口には、交通誘導員を適切に配置し、工事車両とともに一般車両及び歩行者に対しても必要な誘導を行うこと。</p> <p>(2) 出入口では、歩行者及び一般交通を優先すること。</p>	<p>2.2.4 Traffic Accident Prevention at Site Entrance In order to prevent traffic accidents occurring near or at the Site entrance, the Contractor shall:</p> <p>(1) Provide a warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and warns of the possible emergence of construction traffic/equipment.</p> <p>(2) Provide traffic signals or traffic flagmen for safe control of construction traffic/equipment and vehicles and pedestrians on the public road highway.</p> <p>(3) Give priority to pedestrians and passing vehicles at the entrance and strive to prevent traffic accidents caused by the emergence of construction traffic/equipment from the entrance.</p>	<p>2.2.4 Traffic Accident Prevention at Site Entrance In order to prevent traffic accidents occurring near or at the Site entrance, the Contractor shall:</p> <p>(1) Provide a warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment;</p> <p>(2) Provide traffic signals or traffic flagmen for safe control of construction traffic/equipment and vehicles and pedestrians on the public road; and</p> <p>(3) Give priority to pedestrians and passing vehicles at the entrance.</p>
<p>2.2.5 地域住民とのコミュニケーション 請負者は、工事現場周辺の地域住民とのコミュニケーションを図るために、次の措置を講じなければならない。</p> <p>(1) 工事着手前に、周辺住民への工事概要の周知に関して発注者に協力すること</p> <p>(2) 工事場所が学校施設近辺にある場合には、請負者は、本契約で別途定めるところに従い、近隣住民に対して交通安全にかかる啓蒙活動を行うとともに、請負者の要員に対して特に登下校時の工事車両の通行に関するルール・留意事項を周知すること。</p> <p>(3) 工事中に周辺住民等から、請負者に対する苦情又は要望があったときは、請負者はエンジニアに直ちに報告すること。</p>	<p>2.2.5 Community Relations In order to improve communications with the local community near to the Site, the Contractor shall:</p> <p>(1) Cooperate with the Employer regarding dissemination of comprehensive information about the project to the nearby community before commencing construction;</p> <p>(2) Particularly where the Site is in the vicinity of schools, conduct traffic safety and awareness educational activities for the local community as required in accordance with the Contract, as requested by the Employer or as instructed by the Engineer. Also inform the Contractor's Personnel of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school; and</p>	<p>2.2.5 Community Relations In order to improve communications with the local community near to the Site, the Contractor shall:</p> <p>(1) Cooperate with the Employer regarding dissemination of comprehensive information about the project to the nearby community before commencing construction;</p> <p>(2) Particularly where the Site is in the vicinity of schools, conduct traffic safety and awareness activities for the local community as separately required in the Contract. Also inform the Contractor's Personnel of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school; and</p>

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	(3) Report immediately to the Engineer if the local community raises any complaints or requests to the Contractor.	(3) Report immediately to the Engineer if the local community raises any complaints or requests to the Contractor.

JICA Standard Safety Specification Preparation Study
2.3 Measures of No-entry (English R1)

2019.7.18 Study Team Translation R0
2019.9.6 Study Team Translation R1

Specification in Japanese (Provisional Final Draft R1)	English Translation (Provisional Final Draft R1)	Comment / Revised by M D
<p>2 安全措置一般</p> <p>2.3 立入禁止の措置</p> <p>(1) 請負者は、当該作業に従事する者及び立入りを許可された者以外の下記の場所への立入りを禁止し、見やすい箇所に具体的な危険の内容と共にその旨を標示しなければならない。</p> <p>(a) 当該作業者が十分に注意を払いながら、危険な作業を行っている場所</p> <p>(b) 当該作業者以外の者が立入ると、作業をしている者に危険が生じるおそれのある場所</p> <p>(2) 請負者は、保護具の装備をしないで立ち入ると健康等に支障がある下記のような有害な作業箇所には、事前に作業許可を与えた請負者の要員以外の者を立ち入らせないようにするとともに、必要に応じ立入防止施設(柵、仮囲い等)または監視人を配置しなければならない。</p> <p>(a) 多量の高熱物体を取り扱う場所又は著しく暑熱な場所</p> <p>(b) 多量の低温物体を取り扱う場所又は著しく寒冷な場所</p> <p>(c) 有害な光線又は超音波にさらされる場所</p> <p>(d) 酸素濃度、硫化水素濃度及び炭酸ガス濃度が2.1.6(作業環境の把握)に規定する基準に抵触する場所、</p> <p>(e) ガス、蒸気又は粉じんを発散する有害な場所</p> <p>(f) 有害物を取り扱う場所</p> <p>(3) 請負者は、下記のような場所への立入りを禁止し、見やすい箇所に具体的な理由と共にその旨を標示するとともに、立入防止施設(柵、仮囲い等)または監視人を配置しなければならない。</p> <p>(a) 一時的に作業が行われない場所(仮設構造物を含む)で、立ち入った者に危険が及ぶ恐れのあるもの</p> <p>(b) 工事中に地雷、不発弾、有毒ガス等の危険物の存在が確認された場所</p> <p>(c) その他、一時的に立入禁止とすることが必要となる事由が発生した場所</p>	<p>2 General Safety Measures</p> <p>2.3 Measures of No-entry</p> <p>(1) The Contractor shall prohibit entry to the following places other than those who are engaged in the work and those who are permitted to enter, and shall place signs at locations easily seen that show the specific hazard and prohibition of entering.</p> <p>(a) Places where the workers are performing dangerous work with paying full attention.</p> <p>(b) Places where the workers may become at risk if anyone enters other than those workers.</p> <p>(2) The Contractor shall permit only the workers who have been given the work permission beforehand at the following harmful work places where health problems may arise if the workers do not wear protective equipment.</p> <p>(a) Place where a lot of high heat objects are handled or of an extremely hot place</p> <p>(b) Place where a lot of cold objects are handled or of an extremely cold place</p> <p>(c) Place exposed to harmful rays or ultrasound</p> <p>(d) Place where the concentration of oxygen, hydrogen sulfide or carbon dioxide exceeds the specified limit values in JSSS 2.1.6 [Monitoring of Work Environment].</p> <p>(e) Harmful places that emit gas, vapor or dust</p> <p>(f) Place where harmful substances are handled</p> <p>(3) The Contractor shall prohibit from entering the following place and install signs at locations easily seen that show prohibition of entering and its concrete reasons. In addition to the above, the Contractor shall provide access prevention fences, enclosures and so on, or watchmen.</p> <p>(a) Place where work is temporarily not performed at the site (including Temporary Works) that may cause danger to who enters the place.</p> <p>(b) Place where the presence of dangerous materials such as landmines, unexploded bombs, toxic gases, etc. has been found during construction.</p> <p>(c) Any other place where temporary entry prohibition is required.</p>	

Specification in Japanese (3 rd Draft) スペック和文(第3案)	Specification in English (1 st Draft)	Specification in English (2 nd Draft) reviewed/edited by MD
<p>2. 安全措置一般</p> <p>2.4 監視員、誘導員の配置</p> <p>2.4.1 監視員、誘導員の配置</p> <p>(1) 建設工事において、請負者は現場の状況、作業の方法に応じて、適宜監視員、誘導員を配置しなければならない。</p> <p>(2) 請負者は、監視員、誘導員に対して、現場状況、危険防止について十分周知を図らなければならない。</p> <p>(3) 監視員とは、次のような業務を行う者をいう。</p> <p>(a) 工事関係者の危険箇所への立入り防止</p> <p>(b) 架空線の近くの工事における建設機械の架空線への接触防止又は充電電路の離隔距離内への接近防止</p> <p>(c) 軌道上又は軌道近接作業での車両接近に対する請負者の要員の退避指示</p> <p>(d) 作業の状況を監視し必要に応じて請負者の要員への注意喚起</p> <p>(e) その他監視が必要な業務。</p> <p>(4) 誘導員とは、次のような業務を行う者をいう。</p> <p>(a) 建設機械を用いる作業において、機械の転倒又は転落防止のための適切な誘導及び合図</p> <p>(b) 建設機械による請負者の要員への接触又は請負者の要員の挟まれ防止のための誘導及び合図</p> <p>(c) 建設機械等の構造物や架空線等への接触防止又は充電電路の離隔距離内への接近を防止するための適切な誘導及び合図</p> <p>(d) その他誘導が必要な業務</p>	<p>2 General Safety Measures</p> <p>2.4 Placement of Spotters and Flagmen</p> <p>2.4.1 Placement of Spotters and Flagmen</p> <p>(1) The Contractor shall arrange spotters and flagmen as appropriate in accordance with the site situation and the method of the Work.</p> <p>(2) The Contractor shall make the spotters and flagmen well informed about the site situation and the risk prevention.</p> <p>(3) A spotter is a person who performs the following roles:</p> <p>(a) To prevent the Contractor's Personnel from entering dangerous places,</p> <p>(b) To prevent construction equipment from coming into contact with overhead lines in close proximity work or from accessing the minimum allowable distance of the charging line,</p> <p>(c) To give an instruction to the Contractor's Personnel on or near the track to evacuate from approaching vehicle,</p> <p>(d) To monitor work status and alert to the Contractor's Personnel as needed, and</p> <p>(e) Other tasks which require monitoring.</p> <p>(4) A flagman is a person who performs the following roles:</p> <p>(a) To give appropriate guidance and signals in operation of construction equipment for preventing them from overturning or falling,</p> <p>(b) To give appropriate guidance and signals for preventing the Contractor's Personnel from being struck or pinned by the construction equipment</p> <p>(c) To give appropriate guidance and signals for preventing the construction equipment from coming into contact with overhead lines in close proximity work or from accessing the minimum allowable distance of the charging line</p> <p>(d) Other tasks which require guidance</p>	
<p>2.4.2 合図の統一</p> <p>(1) 請負者は、工事に機械を使用する場合で、請負者の要員に危険を及ぼすおそれのあるときは、一定の合図を定め、合図者を指名して、請負者の要員に対し合図を行なわせなければならない。請負者は、請負者の要員にこの合図に従わせなければならない。</p>	<p>2.4.2 Unifying Signals</p> <p>(1) When using construction equipment, if there is a risk to the Contractor's Personnel, the Contractor shall set a signal system and appoint a signal person to give the Contractor's Personnel necessary signals. The Contractor shall make his Personnel to follow the signals.</p>	

JICA Standard Safety Specification Preparation Study (安全標準スペック作成にかかる本格調査)
Study Paper Section 2 Fall prevention ((English 1st Draft) 検討経緯書 2.5 墜落防止 (英文第 1 案))

2019.5.22 Study Team Translation (1st)

2019.5.xx Study Team Reviewed (2nd)

Spec. in Japanese (4th/Final Draft in Japanese) 和文(第 4 案/最終案)	Specification in English (1 st Draft)	Specification in English (2 nd Draft) reviewed/edited by Mr. Durrant
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2 安全措置一般 2.5 墜落防止 2.5.1 一般事項 (1) 請負者は、墜落の危険がある作業を行う場合は、必要な墜落防止措置について、関連の作業計画書及び安全衛生詳細計画書に記載し、エンジニアのレビューを受けなければならない。 (2) 請負者は、墜落防止に関する当該国の法律及び本仕様書のいずれにも規定が無い事項は、米国 OSHA 規則 Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection を参照して、必要と判断する措置を講じなければならない。 (3) 本節は通路、足場・作業床、作業床端・開口部からの墜落防止、また掘削、ロープ高所作業における墜落防止に関する事項を規定し、物体の飛来、落下による災害防止のための規定は本仕様書 2.6[飛来落下の防止措置]、昇降設備・足場等の設備の材料、構造、設置・解体時の留意事項、点検等に関する規定は本仕様書 5.4[足場等]及び本仕様書 5.5[通路・昇降設備・栈橋]にて規定する。	2 General Safety Measures 2.5 Fall Prevention 2.5.1 General Items (1) The Contractor shall, in the case when works at risk for the falling are carried out, list necessary measures for preventing falls in the relevant Particular Method Statement and the Particular Health and Safety Plan, and take a review by the Engineer. (2) For any matters not provided in the laws of the recipient country and in any part of this Specification, the Contractor shall take necessary measures for fall prevention subject to “Subpart M – Fall Protection” of “Part 1926 - Safety and Health Regulations for Construction” in the OSHA Standard. (3) Provisions of measures for fall prevention from passages, scaffolding, working floors, the edge of working floors and openings, and for fall prevention at excavation works and rope aerial works are stipulated in this section. Provisions for preventing falls from flying and falling are stipulated in 2.6 [Preventing Measures for Flying and Falling], and provisions of materials, structures, points to consider in installation and dismantlement, and checkup in relation to raising and lowering equipment and scaffoldings are stipulated in 5.4 [Scaffoldings etc.] and 5.5 [Passages, Lifting Equipment and Piers].	
2.5.2 通路からの墜落防止措置 (1) 安全な通路の設置 請負者は、作業場に通ずる場所及び作業場内には、作業員が使用するための安全な通路を設け、かつ、これを常時有効に保持しなければならない。また、主要な通路には、これを保持するため、通路の表示を行なわ	2.5.2 Measures for Preventing Falls from Passages (1) Installation of safe passages The Contractor shall provide safe passages leading to working spaces and inside of them with safe passages for workers, and maintain them effectively at all times. And, the Contractor shall display signs indicating	

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<p>なければならない。</p> <p>(2) 架設通路</p> <p>請負者は、架設通路の墜落の危険のある箇所には、次に掲げる設備(丈夫な構造の設備であって、たわみが生ずるおそれがなく、かつ、著しい損傷、変形又は腐食がないものに限る)又はこれらと同等以上の機能を有する墜落防止設備を設置しなければならない。</p> <p>(a) 高さ 85cm 以上の手すり</p> <p>(b) 高さ 35cm 以上 50cm 以下の中棧</p> <p>(3) 作業の必要上、臨時に墜落防止設備を取り外す場合の措置</p> <p>請負者は、次の措置を講じなければならない。</p> <p>(a) 墜落制止用器具を安全に取り付けるための設備等を設け、かつ、作業員に墜落制止用器具を使用させる措置又はこれと同等以上の効果を有する措置を講ずること。</p> <p>(b) 前項の措置を講ずる箇所には、関係作業員以外の作業員を立ち入らせないこと。</p> <p>(c) 取り外す必要がなくなった後は、直ちにこれらの設備を原状に復すること。</p>	<p>they are passages in order to maintain their effectiveness.</p> <p>(2) Temporary Passages</p> <p>The Contractor shall provide the following equipment (only materials to be of sound structure, without the possibility of deflection, without significant damage, corrosion, etc.) or fall preventing equipment with the same or higher functions to them at places where are liable to cause falling dangers from temporary passages.</p> <p>(a) Handrails at the height of 85cm or higher</p> <p>(b) Midrails at the height of 35 – 50 cm</p> <p>(3) Measures in the case fall preventing equipment is temporarily removed according to the needs of the work</p> <p>The Contractor shall take the following measures:</p> <p>(a) Provide facilities to fix personal fall arrest system safely and have the workers use them, or take measures with the same or higher functions to use the personal fall arrest system,</p> <p>(b) Not to allow workers other than those concerned to enter the place where is liable to happen fall accidents, and</p> <p>(c) Restore these facilities to their original condition immediately after the necessity of removal is terminated.</p>	
<p>2.5.3 足場・作業床からの墜落防止措置</p> <p>(1) 請負者は、高さが 2m 以上の箇所(作業床の端、開口部等を除く。)で作業を行なう場合において墜落により作業員に危険を及ぼすおそれのあるときは、足場を組み立てる等の方法により作業床を設置しなければならない。</p> <p>(2) 請負者は、作業床を設けることが困難なときは、墜落による作業員の危険を防止するため、次の措置を講じなければならない。</p> <p>(a) 作業員に墜落制止用器具を使用させること。</p> <p>(b) 墜落制止用器具を安全に取り付けるための設備を設けること。</p> <p>(c) 墜落制止用器具及びその取付け設備等の異常の有無について、随時点検を行うこと。</p> <p>(3) 請負者は、作業員に墜落の危険を及ぼすおそれのある箇所には、次の足場に応じて、それぞれ次に掲げる設備(丈夫な構造の設備であり、たわみが生ずるおそれがなく、かつ、著しい損傷、変形又は腐食がないものに限る。)又はこれらと同等以上の機能を有する墜落防止設備を設置しなければならない。</p> <p>(a) わく組足場(妻面に係る部分を除く。)</p> <p>交差筋かい及び高さ 15cm 以上 40cm 以下の棧又は高さ 15cm 以上の幅木</p> <p>(b) わく組足場以外の足場、及びわく組足場の妻面</p> <p>本仕様書 2.5.2(2)に規定する手すり及び中棧</p>	<p>2.5.3 Measures for Preventing Falls from the End of Working Floors and Openings</p> <p>(1) The Contractor shall provide a working floor by installation of scaffolding or by other methods in the case where carrying out an operation at a place having a height of 2 m or more (excluding the end of a working floor, an opening, etc.) and when it is liable to endanger workers due to a fall.</p> <p>(2) The Contractor shall take the following measures to prevent workers from dangers due to fall when it is difficult to provide a working floor.</p> <p>(a) Have workers use personal fall arrest systems,</p> <p>(b) Provide facilities to fix personal fall arrest system safely, and,</p> <p>(c) Carry out extra inspections to identify abnormalities in personal fall arrest systems and their facilities to be fixed.</p> <p>(3) The Contractor shall install facilities, depending on the scaffoldings listed below, (only materials to be of sound structure, without the possibility of deflection, without significant damage, corrosion, etc.) or install fall preventing facilities with the same or higher functions to them at places where workers may be at risk of falling.</p> <p>(a) Frame scaffold (except for gable sides)</p> <p>Cross brace and midrails at the height of 15 – 40 cm or baseboards with the height of 15cm or more</p> <p>(b) Scaffold except for frame scaffold and gable sides of them</p>	

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<p>(4) 請負者は、作業の性質上、墜落防止設備を設けることが著しく困難な場合又は作業の必要上臨時に墜落防止設備を取り外す場合、次の措置を講じなければならない。</p> <p>(a) 墜落制止用器具を安全に取り付けるための設備を設け、かつ、作業員に墜落制止用器具を使用させる措置又はこれと同等以上の効果を有する措置を講ずること。</p> <p>(b) 前項の措置を講ずる箇所に、関係作業員以外の作業員を立ち入らせないこと。</p>	<p>Handrails and midrails pursuant to 2.5.2(2) in this specification</p> <p>(4) The Contractor shall take the following measures when it is extremely difficult to install fall prevention facilities or when they are temporarily removed due to the need of the work due to the nature of the work.</p> <p>(a) Provide facilities to fix fall arrest systems safely and have the workers use them or take measures with the same or higher functions to use the personal fall arrest system, and,</p> <p>(b) Prohibit workers other than those concerned to enter the place where is liable to happen fall accidents.</p>	
<p>2.5.4 作業床端、開口部からの墜落防止措置</p> <p>請負者は、高さが 2m 以上の作業床端、開口部からの墜落防止のために次の措置を講じなければならない。</p> <p>(1) 作業床の端、開口部等には、必要な強度を持つ囲い、手すり、覆い等(以下「囲い等」という)を設置すること。</p> <p>(2) 囲い等を設けることが著しく困難なとき又は作業の必要上臨時に囲い等を取りはずすときは作業員に墜落制止用器具を使用させること。</p> <p>(3) 床上の開口部の覆い上には、原則として材料等を置かないこととし、その旨を表示すること。</p> <p>(4) 囲い等をやむを得ず取りはずして作業をする場合には、当該場所への関係作業員以外の立入禁止措置(標識の設置、作業員への周知)及び監視員の配置を行うこと。また、取りはずした囲い等は、作業終了後直ちに復旧すること。</p> <p>(5) 作業床の端、開口部等の囲い等の点検を作業開始前に必ず行い、不具合のある施設の使用禁止措置を行うと同時に修理や復旧の措置を迅速に行うこと。</p> <p>(6) 開口部の覆い等は、覆い上を通行する可能性のある作業員などの通過物に対して 2 倍以上の耐力を確保すること。</p>	<p>2.5.4 Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take the following measures to prevent falling from the end of working floors or openings with the height of 2m or higher.</p> <p>(1) Provide enclosures, handrails, covers, etc. with necessary strength at the end of working floors and openings.</p> <p>(2) Have workers use personal fall arrest systems when it is extremely difficult to provide enclosures or when removing enclosures temporarily according to the needs of the work.</p> <p>(3) Not to place any materials on covers over the openings in principle and display signs indicating it.</p> <p>(4) In the case when carrying out an operation after removing enclosures etc. by necessity, take measures of no-entry for workers other than those concerned (Installation of signs and notification to workers) and deploy a guard. And, the removed enclosures have to be restored immediately after the operation is completed.</p> <p>(5) Inspect the end of the working floors and the enclosures of the openings etc. before starting the work, and take measures to prohibit the use of facilities with fault as well as carrying out repair and restoration promptly.</p> <p>(6) Secure at least twice the bearing capacity to passing objects such as workers who may pass on the cover.</p>	
<p>2.5.5 掘削作業における墜落防止措置</p> <p>(1) 請負者は、墜落のおそれのある人力のり面整形作業等では、親綱を設置し、墜落制止用器具を使用させなければならない。その際、親綱の上方のり面との接触による土砂等の崩壊等が生じないように配慮しなければならない。</p> <p>(2) 請負者は、斜面を昇降する必要のある場合には、安全な昇降設備を設けなければならない。施工上、当該措置が講じ難い場合は、親綱を設置し墜落制止用器具を使用させること。この場合、親綱の固定部は、ゆるみ等が生じないよう十分安全性について確認しなければならない。</p> <p>(3) 請負者は、のり肩を通路とする際には、転落防止柵等を設置しなければ</p>	<p>2.5.5 Measures for Preventing Falls during Excavation Work</p> <p>(1) The Contractor shall install main ropes and have workers use fall arrest systems in the case of slope trimming work with the risk of falling. At that time, the Contractor also shall take into consideration of avoiding the occurrence of earth collapse etc. by contact with the upper slope of main ropes.</p> <p>(2) The Contractor shall provide safe lifting equipment when it is necessary to move up and down the slope. And if it is difficult to take such measures due to the nature of the work, the Contractor shall install main ropes and have workers use fall arrest systems. In this case, the fixed part of the main ropes should be securely checked for safety enough to prevent loosening</p>	

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<p>ならない。</p> <p>(4) 請負者は、土留・支保工内の掘削には、最低2箇所に通路を設置することとし、切梁、腹起し等の土留・支保工部材上の通行を禁止しなければならない。</p>	<p>etc.</p> <p>(3) The Contractor shall install a fall prevention fence etc. when using slope shoulder as passages.</p> <p>(4) The Contractor shall install a passage at least at two places and shall prohibit the passage on the soil retention and support members such as braces and wales in the case of excavating for soil retention and support work.</p>	
<p>2.5.6 ロープ高所作業における墜落防止措置</p> <p>請負者は、高さが2m以上の箇所で、作業床を設けることが困難な箇所においてロープ高所作業を行う場合には、墜落防止のために下記の措置を講じなければならない。</p> <p>(1) 墜落防止のための措置</p> <p>(a) 身体保持器具を取り付けた親綱以外に、墜落制止用器具を取り付けるための命綱を設置すること。</p> <p>(b) 親綱・命綱、これらを支持物に緊結するための緊結具、身体保持器具及びこれを親綱に取り付けるための接続器具(以下これらを「親綱等」という。)については、十分な強度を有するものであって、著しい損傷、摩耗、変形又は腐食がないものを使用すること。</p> <p>(2) 親綱・命綱・身体保持器具</p> <p>(a) 親綱と命綱は、作業箇所の上方のそれぞれ異なる堅固な支持物に、外れないように確実に緊結すること。</p> <p>(b) 親綱と命綱は、ロープ高所作業に従事する作業員が安全に昇降するため十分な長さとする。</p> <p>(c) 突起物などで親綱や命綱が切断するおそれのある箇所では、覆いを設けるなど切断を防止するための措置をとること。</p> <p>(d) 親綱は異なる2つ以上の強固な支持物に緊結すること。</p> <p>(e) 身体保持器具は接続器具を用いて確実に取り付けること。なお接続器具は使用する親綱に適合したものを使用すること。</p> <p>(3) 作業の手続き</p> <p>(a) 作業開始前の調査</p> <p>請負者は、作業を行う箇所について、あらかじめ、次の項目を調査しその結果を記録すること。</p> <p>(i) 作業箇所とその下方の状況</p> <p>(ii) 親綱と命綱を緊結するためのそれぞれの支持物の位置、状態、それらの周囲の状況</p> <p>(iii) 作業箇所と支持物に通じる通路の状況</p> <p>(iv) 親綱又は命綱の切断のおそれのある箇所の有無並びにその位置及びその状態</p> <p>(b) 作業計画書及び安全衛生詳細計画書</p> <p>請負者は、ロープ高所作業を行う場合には、前項の調査を踏まえ、</p>	<p>2.5.6 Measures for Preventing Falls during Rope Aerial Work</p> <p>The Contractor shall take the following measures to prevent falling when carrying out rope aerial work where it would be difficult to install working floors at a height of 2 m or more.</p> <p>(1) Measures for preventing falls</p> <p>(a) Install life lines for hooking up the workers' fall arrest systems in addition to the main ropes to which the body holding devices are attached.</p> <p>(b) Ensure that the main ropes, life lines and body holding devices have sufficient strength and that they have not suffered any marked damage, abrasion, deformation or corrosion and then have workers use them.</p> <p>(2) Main rope, lifeline and body holding device</p> <p>(a) Ensure that the main ropes and life lines have to be securely fastened to different rigid supports above the work position so as not to come off.</p> <p>(b) Ensure that main ropes and life lines have to be long enough for workers engaged in rope aerial work to move up and down safely.</p> <p>(c) Take measures to prevent cutting, such as providing a cover, where there is a risk that the main ropes and life lines may cut due to protrusions.</p> <p>(d) Ensure that main ropes have be bound to two or more different strong supports.</p> <p>(e) Ensure that the workers' fall arrest systems have to be securely attached to body-retaining devices. In addition, the connecting device must be compatible with the main ropes used.</p> <p>(3) Procedure of work</p> <p>(a) Survey before commencing work</p> <p>The contractor shall check the following points about their work places in advance and record the results.</p> <p>(i) Work locations and the conditions below them,</p> <p>(ii) Position, state, and surrounding conditions of each support for fixing main ropes and life lines,</p>	

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<p>同作業に関する作業計画書及び安全衛生詳細計画書を作成し、同計画書に記載された下記事項について作業員へ周知すること。</p> <p>(i) 作業の方法及び順序</p> <p>(ii) 作業に従事する作業員の人数</p> <p>(iii) 親綱及び命綱を緊結するためのそれぞれの支持物の位置</p> <p>(iv) 使用する親綱等の種類及び強度</p> <p>(v) 使用する親綱及び命綱の長さ</p> <p>(vi) 切断のおそれのある箇所及び切断防止措置</p> <p>(vii) 親綱及び命綱を支持物に緊結する作業に従事する作業員の墜落による危険を防止するための措置</p> <p>(viii) 物体の落下による作業員の危険を防止するための措置</p> <p>(ix) 労働災害が発生した場合の応急の措置</p> <p>(c) 請負者は、ロープ高所作業を行うときは、当該作業を指揮する作業主任を任命し、その者に前項の作業計画に基づき作業の指揮を行わせるとともに、次の事項を行わせること。</p> <p>(i) 作業の開始前に作業計画書及び安全衛生詳細計画書の内容を作業員に対して周知すること。</p> <p>(ii) 作業の開始前に当日使用する器具を点検し、異常がある場合は直ちに補修又は取り替えること。</p> <p>(iii) 親綱・命綱、墜落制止用器具及び保護帽についての措置が実施された後、作業員に作業を開始させること。</p> <p>(iv) 作業に従事する作業員に墜落制止用器具を使用させること。使用する墜落制止用器具は命綱に取り付けさせること。</p> <p>(v) 物体の飛来・落下による事故防止のため、作業員に保護帽を着用させること。</p> <p>(d) ロープ高所作業に従事する作業員(補助員は除く)は総則で規定の特別教育修了者を配置すること。</p>	<p>(iii) Situation of passages leading to work places and supports, and,</p> <p>(iv) The presence or absence of points where there is a risk of disconnection on main ropes or life lines, and their positions and conditions.</p> <p>(b) The Particular Method Statement or Particular Health and Safety Plan</p> <p>When carrying out rope aerial works, the contractor shall prepare the Particular Method Statement and the Particular Health and Safety Plan based on the survey in the previous section and shall inform workers about the following matters described in those plans.</p> <p>(i) Method and order of the work</p> <p>(ii) Number of workers engaged in the work</p> <p>(iii) Location of each support that is used to bind the main ropes and lifelines</p> <p>(iv) Types and strengths of the main ropes etc. to be used</p> <p>(v) Length of the main ropes and lifelines to be used</p> <p>(vi) Points where the ropes may be severed and measures to prevent this</p> <p>(vii) Measures to prevent workers engaged in binding the main ropes and lifelines to the supports from falling</p> <p>(viii) Measures to prevent the danger of workers from falling objects</p> <p>(ix) First-aid measures in the event of occupational accidents</p> <p>(c) When carrying out rope aerial works, the Contractor shall appoint an Operation Leader and have the personnel direct the task based on the Particular Method Statement described in the previous section and perform the following matters:</p> <p>(i) Inform all workers of the content of the Particular Method Statement and the Particular Health and Safety Plan before commencement of the works,</p> <p>(ii) Check the equipment used on the day before the commencement of the work, and repair or replace it immediately when any abnormality is identified,</p> <p>(iii) Have the workers start work after the measures have been taken for main ropes & life lines, fall arrest systems and protective helmets,</p> <p>(iv) Have workers use fall arrest systems. And, have them fix the fall arrest systems to the life lines, and,</p> <p>(v) Have workers wear protective helmets to prevent accidents due to flying or falling objects.</p>	

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	(d) Appoint workers (other than support workers) who have completed the special educations prescribed in the General Rules to carry out rope aerial work.	
<p>2.5.7 作業員に対する措置</p> <p>請負者は、墜落防止のために作業員に対する下記の措置を講じなければならない。</p> <p>(1) 新規に入場した作業員に対しては、当該現場の墜落のおそれのある箇所及び作業について、作業の開始前に安全教育を行うこと。</p> <p>(2) 作業開始前に、墜落のおそれのある箇所の説明を行うこと。</p> <p>(3) 墜落防止設備及び囲い等の無断取りはずしの禁止について教育し、監督指導すること。</p> <p>(4) 墜落制止用器具を含む保護具の保管管理について指導すること。</p> <p>(5) 高所作業に従事する作業員については、年齢、体力等に配慮し、特に健康状態を確認して配置すること。</p> <p>(6) 高所の作業においては、未熟練者、高齢者の配置を避けること。</p> <p>(7) 高さが2m以上の箇所で作業を行う場合において、強風、大雨、大雪等の悪天候のため、当該作業の実施について危険が予想されるときは、作業を中止すること。</p>	<p>2.5.7 Measures for Workers</p> <p>The Contractor shall provide the following measures to workers for preventing falls.</p> <p>(1) For newly arrived workers, conduct safety education before starting work on locations and operations at a risk of falling.</p> <p>(2) Before starting work, instruct workers on the places where there is a risk of falling.</p> <p>(3) Educate and instruct the prohibition of unauthorized removal of fall prevention facilities and enclosures.</p> <p>(4) Instruct on storage and management of protective equipment including fall arrest system.</p> <p>(5) For workers engaged in aerial work, consider their age, physical strength, etc., and in particular check health conditions and arrange them.</p> <p>(6) In aerial work, avoid the placement of unskilled or elderly personnel, and.</p> <p>(7) Stop the work at the working spaces with 2m or more in height if there is a risk of carrying out operations due to bad weather such as strong wind, heavy rain, or heavy snow.</p>	
<p>2.5.8 墜落防止に関する保護具</p> <p>請負者は、作業員に墜落制止用器具を使用させる場合、次を遵守しなければならない。</p> <p>(1) 墜落制止用器具の選定</p> <p>墜落制止用器具は、フルハーネス型を原則とする。ただし、墜落時に着用者が地面に到達するおそれのある場合(フルハーネス型を使用した場合の自由落下距離、ショックアブソーバーの伸び及び安全離隔距離(1m)の合計長さが作業時の高さを超える場合)、胴ベルト型の使用を認める。</p> <p>(2) ショックアブソーバーの選定</p> <p>墜落制止用器具は、当該墜落制止用器具の着用者の体重及びその装備品の質量の合計に耐えるものでなければならない。請負者は、装着者の作業状態(腰の高さ以上にフックを掛けての作業、足下にフックを掛けての作業等の状態)に応じた落下による衝撃を緩和するショックアブソーバーを選定すること。</p> <p>(3) 上記以外の保護具および器具</p> <p>ショックアブソーバについては、装着者の作業状態(コネクタの取付設備の高さ、ランヤードの長さ等)から想定される自由落下距離に応じた、適切</p>	<p>2.5.8 Protective Equipment for Preventing Falls</p> <p>The Contractor shall comply with the following when having workers use fall arrest systems.</p> <p>(1) Selection of fall arrest system</p> <p>In principle, fall arrest system should be of the full harness type. However, when there is a risk of the workers reaching the ground at the time of falling (When the total length of free fall distance, extension of shock absorber and safe separation distance (1 m) when full harness type is used exceeds working height), The Contractor may have workers use the body belt type fall arrest system.</p> <p>(2) Selection of shock absorber</p> <p>The shock absorber shall withstand the total weight of the worker who put on the fall arrest system and the weight of it. The Contractor shall select a shock absorber that reduces the impact of the drop depending on the working conditions of the worker (Work such as hooking work above waist level, hooking work under feet, etc.).</p> <p>(3) Protective equipment and equipment other than the above</p> <p>For shock absorbers, select an appropriate specification and type according</p>	

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<p>な仕様・種別のものを選定すること。</p> <p>(4) 墜落制止用器具は、見やすい箇所に当該墜落制止用器具の種類、製造者名及び製造年月が表示されているものでなければならない。</p> <p>(5) 上記以外の保護具及び器具</p> <p>上記規定にかかわらず墜落防止に関する保護具及び器具については、作業員に次の規則に拠る保護具を使用させることも可とする。</p> <p>米国 OSHA 規則 Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, § 1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.</p>	<p>to the free fall distance assumed from the worker's working condition (height of connector installation equipment, length of lanyard, etc.).</p> <p>(4) Fall arrest system shall be such that the type of fall arrester on which the name of the manufacturer and the date of manufacture are displayed in an easy-to-see place.</p> <p>(5) Protective equipment and equipment other than the above</p> <p>Notwithstanding the above, it is possible to have workers use protective equipment in accordance with the following standard for protective equipment and equipment concerning fall prevention.</p> <p>Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.</p>	

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2 安全措置一般	2 General Safety Measures	
2.5 墜落防止	2.5 Fall Prevention	
2.5.1 一般事項	2.5.1 General Items	
(1) 請負者は、墜落の危険がある作業を行う場合は、必要な墜落防止措置について、関連の作業計画書及び安全衛生詳細計画書に記載し、エンジニアのレビューを受けなければならない。	(1) The Contractor shall, in the case when works at risk for the falling are carried out, list necessary measures for preventing falls in the relevant Particular Method Statement and the Particular Health and Safety Plan, and take a review by the Engineer.	
(2) 請負者は、墜落防止に関する当該国の法律及び本仕様書のいずれにも規定が無い事項は、米国 OSHA 規則 Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection を参照して、必要と判断する措置を講じなければならない。	(2) For any matters not provided in the laws of the recipient country and in any part of this Specification, the Contractor shall take necessary measures for fall prevention subject to “Subpart M – Fall Protection” of “Part 1926 - Safety and Health Regulations for Construction” in the OSHA Standard.	
(3) 本節は通路、足場・作業床、作業床端・開口部からの墜落防止、また掘削、ロープ高所作業における墜落防止に関する事項を規定し、物体の飛来、落下による災害防止のための規定は本仕様書 2.6[飛来落下の防止措置]、昇降設備・足場等の設備の材料、構造、設置・解体時の留意事項、点検等に関する規定は本仕様書 5.4[足場等]及び本仕様書 5.5[通路・昇降設備・栈橋]にて規定する。	(3) Provisions of measures for fall prevention from passages, scaffolding, working floors, the edge of working floors and openings, and for fall prevention at excavation works and rope aerial works are stipulated in this section. Provisions for preventing falls from flying and falling are stipulated in 2.6 [Preventing Measures for Flying and Falling], and provisions of materials, structures, points to consider in installation and dismantlement, and checkup in relation to raising and lowering equipment and scaffoldings are stipulated in 5.4 [Scaffoldings etc.] and 5.5 [Passages, Lifting Equipment and Piers].	
2.5.2 通路からの墜落防止措置	2.5.2 Measures for Preventing Falls from Passages	
(1) 安全な通路の設置 請負者は、作業場に通ずる場所及び作業場内には、作業員が使用するための安全な通路を設け、かつ、これを常時有効に保持しなければならない。また、主要な通路には、これを保持するため、通路の表示を行なわ	第十章 通路、足場等 Chapter X Passage, Scaffolding, etc. 第一節 通路等 (第五百四十条—第五百五十八条) Section 1 Passage, etc. (Articles 540 to 558)	

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<p>なければならない。</p> <p>(2) 架設通路 請負者は、架設通路の墜落の危険のある箇所には、次に掲げる設備(丈夫な構造の設備であって、たわみが生ずるおそれがなく、かつ、著しい損傷、変形又は腐食がないものに限る)又はこれらと同等以上の機能を有する墜落防止設備を設置しなければならない。</p> <p>(a) 高さ 85cm 以上の手すり (b) 高さ 35cm 以上 50cm 以下の中棧</p> <p>(3) 作業の必要上、臨時に墜落防止設備を取り外す場合の措置 請負者は、次の措置を講じなければならない。</p> <p>(a) 墜落制止用器具を安全に取り付けるための設備等を設け、かつ、作業員に墜落制止用器具を使用させる措置又はこれと同等以上の効果を有する措置を講ずること。 (b) 前項の措置を講ずる箇所には、関係作業員以外の作業員を立ち入らせないこと。 (c) 取り外す必要がなくなった後は、直ちにこれらの設備を原状に復すること。</p>	<p>(1) Installation of safe passages The Contractor shall provide safe passages leading to working spaces and inside of them with safe passages for workers, and maintain them effectively at all times. And, the Contractor shall display signs indicating they are passages in order to maintain their effectiveness.</p> <p>(2) Temporary Passages The Contractor shall provide the following equipment (only materials to be of sound structure, without the possibility of deflection, without significant damage, corrosion, etc.) or fall preventing equipment with the same or higher functions to them at places where are liable to cause falling dangers from temporary passages. (a) Handrails at the height of 85cm or higher (b) Midrails at the height of 35 – 50 cm</p> <p>(3) Measures in the case fall preventing equipment is temporarily removed according to the needs of the work The Contractor shall take the following measures: (a) Provide facilities to fix personal fall arrest system safely and have the workers use them, or take measures with the same or higher functions to use the personal fall arrest system, (b) Not to allow workers other than those concerned to enter the place where is liable to happen fall accidents, and (c) Restore these facilities to their original condition immediately after the necessity of removal is terminated.</p>	
<p>2.5.3 足場・作業床からの墜落防止措置</p> <p>(1) 請負者は、高さが 2m 以上の箇所(作業床の端、開口部等を除く。)で作業を行なう場合において墜落により作業員に危険を及ぼすおそれのあるときは、足場を組み立てる等の方法により作業床を設置しなければならない。</p> <p>(2) 請負者は、作業床を設けることが困難なときは、墜落による作業員の危険を防止するため、次の措置を講じなければならない。</p> <p>(a) 作業員に墜落制止用器具を使用させること。 (b) 墜落制止用器具を安全に取り付けるための設備を設けること。 (c) 墜落制止用器具及びその取付け設備等の異常の有無について、随時点検を行うこと。</p> <p>(3) 請負者は、作業員に墜落の危険を及ぼすおそれのある箇所には、次の足場に応じて、それぞれ次に掲げる設備(丈夫な構造の設備であり、たわみが生ずるおそれがなく、かつ、著しい損傷、変形又は腐食がないものに限る。)又はこれらと同等以上の機能を有する墜落防止設備を設置しなければならない。</p> <p>(a) わく組足場(妻面に係る部分を除く。)</p>	<p>2.5.3 Measures for Preventing Falls from the End of Working Floors and Openings (タイトルが一つずれているようです) 第一節 通路等 (第五百四十条—第五百五十八条) Section 1 Passage, etc. (Articles 540 to 558)</p> <p>(1) The Contractor shall provide a working floor by installation of scaffolding or by other methods in the case where carrying out an operation at a place having a height of 2 m or more (excluding the end of a working floor, an opening, etc.) and when it is liable to endanger workers due to a fall.</p> <p>(2) The Contractor shall take the following measures to prevent workers from dangers due to fall when it is difficult to provide a working floor. (a) Have workers use personal fall arrest systems, (b) Provide facilities to fix personal fall arrest system safely, and (c) Carry out extra inspections to identify abnormalities in personal fall arrest systems and their facilities to be fixed.</p> <p>(3) The Contractor shall install facilities, depending on the scaffoldings listed</p>	

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<p>交差筋かい及び高さ 15cm 以上 40cm 以下の棧又は高さ 15cm 以上の幅木</p> <p>(b) わく組足場以外の足場、及びわく組足場の妻面 本仕様書 2.5.2(2)に規定する手すり及び中棧</p> <p>(4) 請負者は、作業の性質上、墜落防止設備を設けることが著しく困難な場合又は作業の必要上臨時に墜落防止設備を取り外す場合、次の措置を講じなければならない。</p> <p>(a) 墜落制止用器具を安全に取り付けるための設備を設け、かつ、作業員に墜落制止用器具を使用させる措置又はこれと同等以上の効果を有する措置を講ずること。</p> <p>(b) 前項の措置を講ずる箇所に、関係作業員以外の作業員を立ち入らせないこと。</p>	<p>below, (only materials to be of sound structure, without the possibility of deflection, without significant damage, corrosion, etc.) or install fall preventing facilities with the same or higher functions to them at places where workers may be at risk of falling.</p> <p>(a) Frame scaffolds (except for gable sides) Cross brace and midrails at the height of 15 – 40 cm or baseboards with the height of 15cm or more</p> <p>(b) Scaffolds except for frame scaffolds and gable sides of them Handrails and midrails pursuant to 2.5.2(2) in this specification</p> <p>(4) The Contractor shall take the following measures when it is extremely difficult to install fall prevention facilities or when they are temporarily removed due to the need of the work due to the nature of the work.</p> <p>(a) Provide facilities to fix fall arrest systems safely and have the workers use them or take measures with the same or higher functions to use the personal fall arrest system, and,</p> <p>(b) Prohibit workers other than those concerned to enter the place where is liable to happen fall accidents.</p>	
<p>2.5.4 作業床端、開口部からの墜落防止措置</p> <p>請負者は、高さが 2m 以上の作業床端、開口部からの墜落防止のために次の措置を講じなければならない。</p> <p>(1) 作業床の端、開口部等には、必要な強度を持つ囲い、手すり、覆い等(以下「囲い等」という)を設置すること。</p> <p>(2) 囲い等を設けることが著しく困難なとき又は作業の必要上臨時に囲い等を取りはずすときは作業員に墜落制止用器具を使用させること。</p> <p>(3) 床上の開口部の覆い上には、原則として材料等を置かないこととし、その旨を表示すること。</p> <p>(4) 囲い等をやむを得ず取りはずして作業をする場合には、当該場所への関係作業員以外の立入禁止措置(標識の設置、作業員への周知)及び監視員の配置を行うこと。また、取りはずした囲い等は、作業終了後直ちに復旧すること。</p> <p>(5) 作業床の端、開口部等の囲い等の点検を作業開始前に必ず行い、不具合のある施設の使用禁止措置を行うと同時に修理や復旧の措置を迅速に行うこと。</p> <p>(6) 開口部の覆いは、覆い上を通行する可能性のある作業員などの通過物に対して 2 倍以上の耐力を確保すること。</p>	<p>2.5.4 Measures for Preventing Falls during Excavation Work</p> <p>第五百十九条 Article 519 (1)</p> <p>The Contractor shall take the following measures to prevent falling from the end of working floors or openings with the height of 2m or higher.</p> <p>(1) Provide enclosures, handrails, covers, etc. with necessary strength at the end of working floors and openings.</p> <p>(2) Have workers use personal fall arrest systems when it is extremely difficult to provide enclosures or when removing enclosures temporarily according to the needs of the work.</p> <p>(3) Not to place any materials on covers over the openings in principle and display signs indicating it.</p> <p>(4) In the case when carrying out an operation after removing enclosures etc. by necessity, take measures of no-entry for workers other than those concerned (Installation of signs and notification to workers) and deploy a guard. And, the removed enclosures have to be restored immediately after the operation is completed.</p> <p>(5) Inspect the end of the working floors and the enclosures of the openings etc. before starting the work, and take measures to prohibit the use of facilities with fault as well as carrying out repair and restoration promptly.</p> <p>(6) Secure at least twice the bearing capacity to passing objects such as workers who may pass on the cover.</p>	
<p>2.5.5 掘削作業における墜落防止措置</p>	<p>2.5.5 Measures for Preventing Falls during Excavation Work</p>	

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<p>(1) 請負者は、墜落のおそれのある人力のり面整形作業等では、親綱を設置し、墜落制止用器具を使用させなければならない。その際、親綱の上方のり面との接触による土砂等の崩壊等が生じないように配慮しなければならない。</p> <p>(2) 請負者は、斜面を昇降する必要のある場合には、安全な昇降設備を設けなければならない。施工上、当該措置が講じ難い場合は、親綱を設置し墜落制止用器具を使用させること。この場合、親綱の固定部は、ゆるみ等が生じないよう十分安全性について確認しなければならない。</p> <p>(3) 請負者は、のり肩を通路とする際には、転落防止柵等を設置しなければならない。</p> <p>(4) 請負者は、土留・支保工内の掘削には、最低2箇所通路を設置することとし、切梁、腹起し等の土留・支保工部材上の通行を禁止しなければならない。</p>	<p>(1) The Contractor shall install main ropes and have workers use fall arrest systems in the case of slope trimming work with the risk of falling. At that time, the Contractor also shall take into consideration of avoiding the occurrence of earth collapse etc. by contact with the upper slope of main ropes.</p> <p>(2) The Contractor shall provide safe lifting equipment when it is necessary to move up and down the slope. And if it is difficult to take such measures due to the nature of the work, the Contractor shall install main ropes and have workers use fall arrest systems. In this case, the fixed part of the main ropes should be securely checked for safety enough to prevent loosening etc.</p> <p>(3) The Contractor shall install a fall prevention fence etc. when using slope shoulder as passages.</p> <p>(4) The Contractor shall install a passage at least at two places and shall prohibit the passage on the soil retention and support members such as braces and wales in the case of excavating for soil retention and support work.</p>	
<p>2.5.6 ロープ高所作業における墜落防止措置</p> <p>請負者は、高さが2m以上の箇所、作業床を設けることが困難な箇所においてロープ高所作業を行う場合には、墜落防止のために下記の措置を講じなければならない。</p> <p>(1) 墜落防止のための措置</p> <p>(a) 身体保持器具を取り付けた親綱以外に、墜落制止用器具を取り付けるための命綱を設置すること。</p> <p>(b) 親綱・命綱、これらを支持物に緊結するための緊結具、身体保持器具及びこれを親綱に取り付けるための接続器具(以下これらを「親綱等」という。)については、十分な強度を有するものであって、著しい損傷、摩耗、変形又は腐食がないものを使用すること。</p> <p>(2) 親綱・命綱・身体保持器具</p> <p>(a) 親綱と命綱は、作業箇所の上方のそれぞれ異なる堅固な支持物に、外れないように確実に緊結すること。</p> <p>(b) 親綱と命綱は、ロープ高所作業に従事する作業員が安全に昇降するため十分な長さとする。</p> <p>(c) 突起物などで親綱や命綱が切断するおそれのある箇所では、覆いを設けるなど切断を防止するための措置をとること。</p> <p>(d) 親綱は異なる2つ以上の強固な支持物に緊結すること。</p> <p>(e) 身体保持器具は接続器具を用いて確実に取り付けること。なお接続器具は使用する親綱に適合したものを使用すること。</p> <p>(3) 作業の手続き</p> <p>(a) 作業開始前の調査</p>	<p>2.5.6 Measures for Preventing Falls during Rope Aerial Work</p> <p>The Contractor shall take the following measures to prevent falling when carrying out rope aerial work where it would be difficult to install working floors at a height of 2 m or more.</p> <p>(1) Measures for preventing falls</p> <p>(a) Install life lines for hooking up the workers' fall arrest systems in addition to the main ropes to which the body holding devices are attached.</p> <p>(b) Ensure that the main ropes, life lines and body holding devices have sufficient strength and that they have not suffered any marked damage, abrasion, deformation or corrosion and then have workers use them.</p> <p>(2) Main rope, lifeline and body holding device</p> <p>(a) Ensure that the main ropes and life lines have to be securely fastened to different rigid supports above the work position so as not to come off.</p> <p>(b) Ensure that main ropes and life lines have to be long enough for workers engaged in rope aerial work to move up and down safely.</p> <p>(c) Take measures to prevent cutting, such as providing a cover, where there is a risk that the main ropes and life lines may cut due to protrusions.</p> <p>(d) Ensure that main ropes have be bound to two or more different strong supports.</p>	

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<p>請負者は、作業を行う箇所について、あらかじめ、次の項目を調査しその結果を記録すること。</p> <p>(i) 作業箇所とその下方の状況</p> <p>(ii) 親綱と命綱を緊結するためのそれぞれの支持物の位置、状態、それらの周囲の状況</p> <p>(iii) 作業箇所と支持物に通じる通路の状況</p> <p>(iv) 親綱又は命綱の切断のおそれのある箇所の有無並びにその位置及びその状態</p> <p>(b) 作業計画書及び安全衛生詳細計画書</p> <p>請負者は、ロープ高所作業を行う場合には、前項の調査を踏まえ、同作業に関する作業計画書及び安全衛生詳細計画書を作成し、同計画書に記載された下記事項について作業員へ周知すること。</p> <p>(i) 作業の方法及び順序</p> <p>(ii) 作業に従事する作業員の人数</p> <p>(iii) 親綱及び命綱を緊結するためのそれぞれの支持物の位置</p> <p>(iv) 使用する親綱等の種類及び強度</p> <p>(v) 使用する親綱及び命綱の長さ</p> <p>(vi) 切断のおそれのある箇所及び切断防止措置</p> <p>(vii) 親綱及び命綱を支持物に緊結する作業に従事する作業員の墜落による危険を防止するための措置</p> <p>(viii) 物体の落下による作業員の危険を防止するための措置</p> <p>(ix) 労働災害が発生した場合の応急の措置</p> <p>(c) 請負者は、ロープ高所作業を行うときは、当該作業を指揮する作業主任を任命し、その者に前項の作業計画に基づき作業の指揮を行わせるとともに、次の事項を行わせること。</p> <p>(i) 作業の開始前に作業計画書及び安全衛生詳細計画書の内容を作業員に対して周知すること。</p> <p>(ii) 作業の開始前に当日使用する器具を点検し、異常がある場合は直ちに補修又は取り替えること。</p> <p>(iii) 親綱・命綱、墜落制止用器具及び保護帽についての措置が実施された後、作業員に作業を開始させること。</p> <p>(iv) 作業に従事する作業員に墜落制止用器具を使用させること。使用する墜落制止用器具は命綱に取り付けさせること。</p> <p>(v) 物体の飛来・落下による事故防止のため、作業員に保護帽を着用させること。</p> <p>(d) ロープ高所作業に従事する作業員(補助員は除く)は総則で規定の特別教育修了者を配置すること。</p>	<p>(e) Ensure that the workers' fall arrest systems have to be securely attached to body-retaining devices. In addition, the connecting device must be compatible with the main ropes used.</p> <p>(3) Procedure of work</p> <p>(a) Survey before commencing work</p> <p>The contractor shall check the following points about their work places in advance and record the results.</p> <p>(i) Work locations and the conditions below them,</p> <p>(ii) Position, state, and surrounding conditions of each support for fixing main ropes and life lines,</p> <p>(iii) Situation of passages leading to work places and supports, and,</p> <p>(iv) The presence or absence of points where there is a risk of disconnection on main ropes or life lines, and their positions and conditions.</p> <p>(b) The Particular Method Statement or Particular Health and Safety Plan</p> <p>When carrying out rope aerial works, the contractor shall prepare the Particular Method Statement and the Particular Health and Safety Plan based on the survey in the previous section and shall inform workers about the following matters described in those plans.</p> <p>(i) Method and order of the work</p> <p>(ii) Number of workers engaged in the work</p> <p>(iii) Location of each support that is used to bind the main ropes and lifelines</p> <p>(iv) Types and strengths of the main ropes etc. to be used</p> <p>(v) Length of the main ropes and lifelines to be used</p> <p>(vi) Points where the ropes may be severed and measures to prevent this</p> <p>(vii) Measures to prevent workers engaged in binding the main ropes and lifelines to the supports from falling</p> <p>(viii) Measures to prevent the danger of workers from falling objects</p> <p>(ix) First-aid measures in the event of occupational accidents</p> <p>(c) When carrying out rope aerial works, the Contractor shall appoint an Operation Leader and have the personnel direct the task based on the Particular Method Statement described in the previous section and perform the following matters:</p> <p>(i) Inform all workers of the content of the Particular Method Statement and the Particular Health and Safety Plan before commencement of the works,</p>	

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	<ul style="list-style-type: none"> (ii) Check the equipment used on the day before the commencement of the work, and repair or replace it immediately when any abnormality is identified, (iii) Have the workers start work after the measures have been taken for main ropes & life lines, fall arrest systems and protective helmets, (iv) Have workers use fall arrest systems. And, have them fix the fall arrest systems to the life lines, and, (v) Have workers wear protective helmets to prevent accidents due to flying or falling objects. (d) Appoint workers (other than support workers) who have completed the special educations prescribed in the General Rules to carry out rope aerial work. 	
<p>2.5.7 作業員に対する措置</p> <p>請負者は、墜落防止のために作業員に対する下記の措置を講じなければならない。</p> <ul style="list-style-type: none"> (1) 新規に入場した作業員に対しては、当該現場の墜落のおそれのある箇所及び作業について、作業の開始前に安全教育を行うこと。 (2) 作業開始前に、墜落のおそれのある箇所の説明を行うこと。 (3) 墜落防止設備及び囲い等の無断取りはずしの禁止について教育し、監督指導すること。 (4) 墜落制止用器具を含む保護具の保管管理について指導すること。 (5) 高所作業に従事する作業員については、年齢、体力等に配慮し、特に健康状態を確認して配置すること。 (6) 高所の作業においては、未熟練者、高齢者の配置を避けること。 (7) 高さが2m以上の箇所で作業を行う場合において、強風、大雨、大雪等の悪天候のため、当該作業の実施について危険が予想されるときは、作業を中止すること。 	<p>2.5.7 Measures for Workers</p> <p>The Contractor shall provide the following measures to workers for preventing falls.</p> <ul style="list-style-type: none"> (1) For newly arrived workers, conduct safety education before starting work on locations and operations at a risk of falling, (2) Before starting work, instruct workers on the places where there is a risk of falling, (3) Educate and instruct the prohibition of unauthorized removal of fall prevention facilities and enclosures, (4) Instruct on storage and management of protective equipment including fall arrest system, (5) For workers engaged in aerial work, consider their age, physical strength, etc., and in particular check health conditions and arrange them, (6) In aerial work, avoid the placement of unskilled or elderly personnel, and, (7) Stop the work at the working spaces with 2m or more in height if there is a risk of carrying out operations due to bad weather such as strong wind, heavy rain, or heavy snow. 	
<p>2.5.8 墜落防止に関する保護具</p> <p>請負者は、作業員に墜落制止用器具を使用させる場合、次を遵守しなければならない。</p> <ul style="list-style-type: none"> (1) 墜落制止用器具の選定 墜落制止用器具は、フルハーネス型を原則とする。ただし、墜落時に着用者が地面に到達するおそれのある場合(フルハーネス型を使用した場合の自由落下距離、ショックアブソーバーの伸び及び安全分離距離(1m)の合計長さが作業時の高さを超える場合)、胴ベルト型の使用を認 	<p>2.5.8 Protective Equipment for Preventing Falls</p> <p>The Contractor shall comply with the following when having workers use fall arrest systems.</p> <ul style="list-style-type: none"> (1) Selection of fall arrest system In principle, fall arrest system should be of the full harness type. However, when there is a risk of the workers reaching the ground at the time of falling (When the total length of free fall distance, extension of shock absorber and safe separation distance (1 m) when full harness type is used 	

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<p>める。</p> <p>(2) ショックアブソーバーの選定 墜落制止用器具は、当該墜落制止用器具の着用者の体重及びその装備品の質量の合計に耐えるものでなければならない。請負者は、装着者の作業状態(腰の高さ以上にフックを掛けての作業、足下にフックを掛けての作業等の状態)に応じた落下による衝撃を緩和するショックアブソーバーを選定すること。</p> <p>(3) 上記以外の保護具および器具 ショックアブソーバについては、装着者の作業状態(コネクタの取付設備の高さ、ランヤードの長さ等)から想定される自由落下距離に応じた、適切な仕様・種別のものを選定すること。</p> <p>(4) 墜落制止用器具は、見やすい箇所当該墜落制止用器具の種類、製造者名及び製造年月が表示されているものでなければならない。</p> <p>(5) 上記以外の保護具及び器具 上記規定にかかわらず墜落防止に関する保護具及び器具については、作業員に次の規則に拠る保護具を使用させることも可とする。 米国 OSHA 規則 Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, § 1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.</p>	<p>exceeds working height), The Contractor may have workers use the body belt type fall arrest system.</p> <p>(2) Selection of shock absorber The shock absorber shall withstand the total weight of the worker who put on the fall arrest system and the weight of it. The Contractor shall select a shock absorber that reduces the impact of the drop depending on the working conditions of the worker (Work such as hooking work above waist level, hooking work under feet, etc.).</p> <p>(3) Protective equipment and equipment other than the above For shock absorbers, select an appropriate specification and type according to the free fall distance assumed from the worker's working condition (height of connector installation equipment, length of lanyard, etc.).</p> <p>(4) Fall arrest system shall be such that the type of fall arrester on which the name of the manufacturer and the date of manufacture are displayed in an easy-to-see place.</p> <p>(5) Protective equipment and equipment other than the above Notwithstanding the above, it is possible to have workers use protective equipment in accordance with the following standard for protective equipment and equipment concerning fall prevention. Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.</p>	

JICA Standard Safety Specification

2nd Draft on Section 2.5 Fall Prevention

Note: Ordinance on Industrial Safety and Health is hereafter referred to as OISH.

<http://www.japaneselawtranslation.go.jp/law/detail/?printID=&re=01&dn=1&x=0&y=0&co=1&ia=03&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=%E5%8A%B4%E5%83%8D%E5%AE%89%E5%85%A8%E8%A1%9B%E7%94%9F&page=21&vm=02>
 20190620 by NKFI
 20190624 NK to MD

1st Draft	Points for revision	2nd Draft <small>Article No. quoted from OISH → [Article No.]</small>
Draft Specification for the Preparation of JICA Safety Standard Specifications (Fall Prevention) Table of Contents 2 General Safety Measures 1 2.5 Fall Prevention 1 2.5.1 General Items 1 2.5.2 Measures for Preventing Falls from Passages 1 2.5.3 Measures for Preventing Falls from the Scaffolding and Working Floors 1 2.5.4 Measures for Preventing Falls from the End of Working Floors and Openings 1 2.5.5 Measures for Preventing Falls during Excavation Work 1 2.5.6 Measures for Preventing Falls during Rope Aerial Work 1 2.5.7 Measures for Workers 1 2.5.8 Protective Equipment for Preventing Falls 1	NKFI: changed words; Working Floor → Working Platform Worker → Labor NKFI: insert 2.5.9 & 2.5.10	Draft Specification for the Preparation of JICA Safety Standard Specifications (Fall Prevention) Table of Contents 2 General Safety Measures 1 2.5 Fall Prevention 1 2.5.1 General Items 1 2.5.2 Measures for Preventing Falls from Passages 1 2.5.3 Measures for Preventing Falls from the Scaffolding and Temporary Working Platforms 1 2.5.4 Measures for Preventing Falls from the End of Working Platforms and Openings 1 2.5.5 Measures for Preventing Falls during Excavation Work 1 2.5.6 Measures for Preventing Falls during Rope Aerial Work 1 2.5.7 Measures for Workers 1 2.5.8 Protective Equipment for Preventing Falls 1 2.5.9 Safe Use of Movable Ladders or Stepladders 1 2.5.10 Roof Top Work 1
2 General Safety Measures 2.5 Fall Prevention 2.5.1 General Items (1) The Contractor shall, in the case when works at risk for the falling are carried out, list necessary measures for preventing falls in the relevant Particular Method Statement and the Particular Health and Safety Plan, and take a review by the Engineer. (2) For any matters not provided in the laws of the recipient country and in any part of this Specification, the Contractor shall take necessary measures for fall prevention subject to “Subpart M – Fall Protection” of “Part 1926 - Safety and Health Regulations for Construction” in the OSHA Standard. (3) Provisions of measures for fall prevention from passages, scaffolding, working floors, the edge of working floors and openings, and for fall prevention at excavation works and rope aerial works are stipulated in this section. Provisions for preventing falls from flying and falling are stipulated in 2.6 [Preventing Measures for Flying and Falling], and provisions of materials, structures, points to consider in installation and dismantlement, and checkup in relation to raising and lowering equipment and scaffoldings are stipulated in 5.4 [Scaffoldings etc.] and 5.5 [Passages, Lifting Equipment and Piers].	NKFI: Mr. MD pointed out on June 12 th , delete this entire clause, all can be covered by Chapter 1 General. NKFI: After discussion with Mr. Sakoda on this, decided to delete clause (1) & (3).	2 General Safety Measures 2.5 Fall Prevention 2.5.1 General Items (1) For any matters not provided in the laws of the recipient country and in any part of this Specification, the Contractor shall take necessary measures for fall prevention subject to “Subpart M – Fall Protection” of “Part 1926 - Safety and Health Regulations for Construction” in the OSHA Standard.

<p>2.5.2 Measures for Preventing Falls from Passages</p> <p>(1) Installation of safe passages The Contractor shall provide safe passages leading to working spaces and inside of them with safe passages for workers, and maintain them effectively at all times. And, the Contractor shall display signs indicating they are passages in order to maintain their effectiveness. 【Article 540】</p> <p>(2) Temporary Passages The Contractor shall provide the following equipment (only materials to be of sound structure, without the possibility of deflection, without significant damage, corrosion, etc.) or fall preventing equipment with the same or higher functions to them at places where are liable to cause falling dangers from temporary passages. (a) Handrails at the height of 85cm or higher (b) Midrails at the height of 35 – 50 cm 【Article 522(1)-4】</p> <p>(3) Measures in the case fall preventing equipment is temporarily removed according to the needs of the work The Contractor shall take the following measures: (a) Provide facilities to fix personal fall arrest system safely and have the workers use them, or take measures with the same or higher functions to use the personal fall arrest system, (b) Not to allow workers other than those concerned to enter the place where is liable to happen fall accidents, and (c) Restore these facilities to their original condition immediately after the necessity of removal is terminated. 【Article 552(2) and 552(3)】 ※Article 552 has a revised version in Jap.</p>	<p>NKFI: Mr. MD pointed out there seems to be no prescription for fall prevention in 2.5.2 when assuming there is a deep excavation area along passages.</p> <p>NKFI: Isn't it considered that 2.5.2(2) is a corresponding prescription?</p>	<p>2.5.2 Measures for Preventing Falls from Passages</p> <p>(1) Installation of safe passages The Contractor shall provide safe passages leading to working spaces and inside of them with safe passages for workers, and maintain them effectively at all times. And, the Contractor shall display signs indicating they are passages in order to maintain their effectiveness. 【Article 540】</p> <p>(2) Temporary Passages The Contractor shall provide the following equipment (only materials to be of sound structure, without the possibility of deflection, without significant damage, corrosion, etc.) or fall preventing equipment with the same or higher functions to them at places where are liable to cause falling dangers from temporary passages. (a) Handrails at the height of 85cm or higher (b) Midrails at the height of 35 – 50 cm 【Article 522(1)-4】</p> <p>(3) Measures in the case fall preventing equipment is temporarily removed according to the needs of the work The Contractor shall take the following measures: (a) Provide facilities to fix personal fall arrest system safely and have the workers use them, or take measures with the same or higher functions to use the personal fall arrest system, (b) Not to allow workers other than those concerned to enter the place where is liable to happen fall accidents, and (c) Restore these facilities to their original condition immediately after the necessity of removal is terminated. 【Article 552(2) and 552(3)】 ※Article 552 has a revised version in Jap.</p>
<p>2.5.3 Measures for Preventing Falls from Scaffoldings and Working Floors</p> <p>(1) The Contractor shall provide a working floor by installation of scaffolding or by other methods in the case where carrying out an operation at a place having a height of 2 m or more (excluding the end of a working floor, an opening, etc.) and when it is liable to endanger workers due to a fall. 【Article 518(1)】</p> <p>(2) The Contractor shall take the following measures to prevent workers from dangers due to fall when it is difficult to provide a working floor. (a) Have workers use personal fall arrest systems, (b) Provide facilities to fix personal fall arrest system safely, and, (c) Carry out extra inspections to identify abnormalities in personal fall arrest systems and their facilities to be fixed. 【Added to Article 518(2)】</p> <p>(3) The Contractor shall install facilities, depending on the scaffoldings listed below, (only</p>	<p>NKFI: Mr. MD pointed out a prescription which refers to setting and/or installation of scaffoldings and working platform should be described in the section for Scaffoldings or Working Platforms in Temporary Works, Chapter 7.</p> <p>NKFI: mostly agreed, however, 2.5.3(1) also refers to countermeasures in the situation that fall disaster is potentially assumed. In addition, article 518 is categorized in the Section 1 Prevention of Dangers due to falls, etc., Chapter IX Prevention of Dangers Due to</p>	<p>2.5.3 Measures for Preventing Falls from Scaffoldings and Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform by installation of scaffolding or by other methods in the case where carrying out an operation at a place having a height of 2 m or more (excluding the end of a temporary working platform, an opening, etc.) and when it is liable to endanger workers due to a fall. 【Article 518(1)】</p> <p>(2) The Contractor shall take the following measures to prevent workers from dangers due to fall when it is difficult to provide a temporary working platform. (a) Have workers use personal fall arrest systems, and (b) Provide facilities to fix personal fall arrest system safely. (c) Carry out extra inspections to identify abnormalities in personal fall arrest systems and their facilities to be fixed. → relocate to 2.5.8(6)</p>

<p>materials to be of sound structure, without the possibility of deflection, without significant damage, corrosion, etc.) or install fall preventing facilities with the same or higher functions to them at places where workers may be at risk of falling.</p> <p>(a) Frame scaffolds (except for gable sides) Cross brace and midrails at the height of 15 – 40 cm or baseboards with the height of 15cm or more</p> <p>(b) Scaffolds except for frame scaffolds and gable sides of them Handrails and midrails pursuant to 2.5.2(2) in this specification 【Article 563(1)-3】</p> <p>(4) The Contractor shall take the following measures when it is extremely difficult to install fall prevention facilities or when they are temporarily removed due to the need of the work due to the nature of the work.</p> <p>(a) Provide facilities to fix fall arrest systems safely and have the workers use them or take measures with the same or higher functions to use the personal fall arrest system, and,</p> <p>(b) Prohibit workers other than those concerned to enter the place where is liable to happen fall accidents. 【Article 563(3)】 ※Article 563 has a revised version in Jap.</p>	<p>Falls, etc. In this sense, we request 2.5.3(1) does not move position as it is.</p> <p>NKFI: Mr. MD pointed out the prescription regarding PPE like as 2.5.3 (2) (c) should be relocated to 2.5.8 Protective Equipment for Preventing Falls and also frequency of inspection of personal fall arrest systems should be prescribed.</p> <p>NKFI : agreed. 2.5.3 (2) (c) will be relocated to 2.5.8.</p>	<p style="text-align: right;">【Added to Article 518(2)】</p> <p>(3) The Contractor shall install facilities, depending on the scaffoldings listed below, (only materials to be of sound structure, without the possibility of deflection, without significant damage, corrosion, etc.) or install fall preventing facilities with the same or higher functions to them at places where workers may be at risk of falling.</p> <p>(a) Frame scaffolds (except for gable sides) Cross brace and midrails at the height of 15 – 40 cm or baseboards with the height of 15cm or more</p> <p>(b) Scaffolds except for frame scaffolds and gable sides of them Handrails and midrails pursuant to 2.5.2(2) in this specification 【Article 563(1)-3】</p> <p>(4) The Contractor shall take the following measures when it is extremely difficult to install fall prevention facilities or when they are temporarily removed due to the need of the work due to the nature of the work.</p> <p>(a) Provide facilities to fix fall arrest systems safely and have the workers use them or take measures with the same or higher functions to use the personal fall arrest system, and,</p> <p>(b) Prohibit workers other than those concerned to enter the place where is liable to happen fall accidents. 【Article 563(3)】 ※Article 563 has a revised version in Jap.</p>
<p>2.5.4 Measures for Preventing Falls from the End of Working Floors and Openings The Contractor shall take the following measures to prevent falling from the end of working floors or openings with the height of 2m or higher.</p> <p>(1) Provide enclosures, handrails, covers, etc. with necessary strength at the end of working floors and openings. 【Article 519(1)】</p> <p>(2) Have workers use personal fall arrest systems when it is extremely difficult to provide enclosures or when removing enclosures temporarily according to the needs of the work. 【Article 519(2)】</p> <p>(3) Not to place any materials on covers over the openings in principle and display signs indicating it. 【New description】</p> <p>(4) In the case when carrying out an operation after removing enclosures etc. by necessity, take measures of no-entry for workers other than those concerned (Installation of signs and notification to workers) and deploy a guard. And, the removed enclosures have to be restored immediately after the operation is completed. 【Added to Article 530】</p> <p>(5) Inspect the end of the working floors and the enclosures of the openings etc. before starting the work, and take measures to prohibit the use of facilities with fault as well as carrying</p>		<p>2.5.4 Measures for Preventing Falls from the End of Working Platforms and Openings The Contractor shall take the following measures to prevent falling from the end of working platforms or openings with the height of 2m or higher.</p> <p>(1) Provide enclosures, handrails, covers, etc. with necessary strength at the end of working platforms and openings. 【Article 519(1)】</p> <p>(2) Have labors use personal fall arrest systems when it is extremely difficult to provide enclosures or when removing enclosures temporarily according to the needs of the work. 【Article 519(2)】</p> <p>(3) Not to place any materials on covers over the openings in principle and display signs indicating it. 【New description】</p> <p>(4) In the case when carrying out an operation after removing enclosures etc. by necessity, take measures of no-entry for labors other than those concerned (Installation of signs and notification to workers) and deploy a guard. And, the removed enclosures have to be restored immediately after the operation is completed. 【Added to Article 530】</p> <p>(5) Inspect the end of the working platforms and the enclosures of the openings etc. before starting the work, and take measures to prohibit the use of facilities with fault as well as</p>

<p>out repair and restoration promptly.</p> <p style="text-align: right;">【New description】</p> <p>(6) Secure at least twice the bearing capacity to passing objects such as workers who may pass on the cover.</p> <p style="text-align: right;">【New description】</p>		<p>carrying out repair and restoration promptly.</p> <p style="text-align: right;">【New description】</p> <p>(6) Secure at least twice the bearing capacity to passing objects such as labors who may pass on the cover.</p> <p style="text-align: right;">【New description】</p>
<p>2.5.5 Measures for Preventing Falls during Excavation Work</p> <p>(1) The Contractor shall install main ropes and have workers use fall arrest systems in the case of slope trimming work with the risk of falling. At that time, the Contractor also shall take into consideration of avoiding the occurrence of earth collapse etc. by contact with the upper slope of main ropes.</p> <p>(2) The Contractor shall provide safe lifting equipment when it is necessary to move up and down the slope. And if it is difficult to take such measures due to the nature of the work, the Contractor shall install main ropes and have workers use fall arrest systems. In this case, the fixed part of the main ropes should be securely checked for safety enough to prevent loosening etc.</p> <p>(3) The Contractor shall install a fall prevention fence etc. when using slope shoulder as passages.</p> <p>(4) The Contractor shall install a passage at least at two places and shall prohibit the passage on the soil retention and support members such as braces and wales in the case of excavating for soil retention and support work.</p> <p style="text-align: right;">【(1)-(4): New description】</p>		<p>2.5.5 Measures for Preventing Falls during Excavation Work</p> <p>(1) The Contractor shall install main ropes and have labors use fall arrest systems in the case of slope trimming work with the risk of falling. At that time, the Contractor also shall take into consideration of avoiding the occurrence of earth collapse etc. by contact with the upper slope of main ropes.</p> <p>(2) The Contractor shall provide safe lifting equipment when it is necessary to move up and down the slope. And if it is difficult to take such measures due to the nature of the work, the Contractor shall install main ropes and have labors use fall arrest systems. In this case, the fixed part of the main ropes should be securely checked for safety enough to prevent loosening etc.</p> <p>(3) The Contractor shall install a fall prevention fence etc. when using slope shoulder as passages.</p> <p>(4) The Contractor shall install a passage at least at two places and shall prohibit the passage on the soil retention and support members such as braces and wales in the case of excavating for soil retention and support work.</p> <p style="text-align: right;">【(1)-(4): New description】</p>
<p>2.5.6 Measures for Preventing Falls during Rope Aerial Work</p> <p>The Contractor shall take the following measures to prevent falling when carrying out rope aerial work where it would be difficult to install working floors at a height of 2 m or more.</p> <p>(1) Measures for preventing falls</p> <p>(a) Install life lines for hooking up the workers' fall arrest systems in addition to the main ropes to which the body holding devices are attached.</p> <p style="text-align: right;">【Article 539-2】</p> <p>(b) Ensure that the main ropes, life lines and body holding devices have sufficient strength and that they have not suffered any marked damage, abrasion, deformation or corrosion and then have workers use them.</p> <p style="text-align: right;">【Article 539-3(1)】</p> <p>(2) Main rope, lifeline and body holding device</p> <p>(a) Ensure that the main ropes and life lines have to be securely fastened to different rigid supports above the work position so as not to come off.</p> <p>(b) Ensure that main ropes and life lines have to be long enough for workers engaged in rope aerial work to move up and down safely.</p> <p>(c) Take measures to prevent cutting, such as providing a cover, where there is a risk that the main ropes and life lines may cut due to protrusions.</p>		<p>2.5.6 Measures for Preventing Falls during Rope Aerial Work</p> <p>The Contractor shall take the following measures to prevent falling when carrying out rope aerial work where it would be difficult to install working platforms at a height of 2 m or more.</p> <p>(1) Measures for preventing falls</p> <p>(a) Install life lines for hooking up the labors' fall arrest systems in addition to the main ropes to which the body holding devices are attached.</p> <p style="text-align: right;">【Article 539-2】</p> <p>(b) Ensure that the main ropes, life lines and body holding devices have sufficient strength and that they have not suffered any marked damage, abrasion, deformation or corrosion and then have labors use them.</p> <p style="text-align: right;">【Article 539-3(1)】</p> <p>(2) Main rope, lifeline and body holding device</p> <p>(a) Ensure that the main ropes and life lines have to be securely fastened to different rigid supports above the work position so as not to come off.</p> <p>(b) Ensure that main ropes and life lines have to be long enough for labors engaged in rope aerial work to move up and down safely.</p> <p>(c) Take measures to prevent cutting, such as providing a cover, where there is a risk that the main ropes and life lines may cut due to protrusions.</p>

<p>(d) Ensure that main ropes have be bound to two or more different strong supports.</p> <p>(e) Ensure that the workers' fall arrest systems have to be securely attached to body-retaining devices. In addition, the connecting device must be compatible with the main ropes used.</p> <p style="text-align: right;">【Article 539-3(2)】</p> <p>(3) Procedure of work</p> <p>(a) Survey before commencing work</p> <p>The contractor shall check the following points about their work places in advance and record the results.</p> <p>(i) Work locations and the conditions below them,</p> <p>(ii) Position, state, and surrounding conditions of each support for fixing main ropes and life lines,</p> <p>(iii) Situation of passages leading to work places and supports, and,</p> <p>(iv) The presence or absence of points where there is a risk of disconnection on main ropes or life lines, and their positions and conditions.</p> <p style="text-align: right;">【Article 539-4】</p> <p>(b) The Particular Method Statement or Particular Health and Safety Plan</p> <p>When carrying out rope aerial works, the contractor shall prepare the Particular Method Statement and the Particular Health and Safety Plan based on the survey in the previous section and shall inform workers about the following matters described in those plans.</p> <p>(i) Method and order of the work</p> <p>(ii) Number of workers engaged in the work</p> <p>(iii) Location of each support that is used to bind the main ropes and lifelines</p> <p>(iv) Types and strengths of the main ropes etc. to be used</p> <p>(v) Length of the main ropes and lifelines to be used</p> <p>(vi) Points where the ropes may be severed and measures to prevent this</p> <p>(vii) Measures to prevent workers engaged in binding the main ropes and lifelines to the supports from falling</p> <p>(viii) Measures to prevent the danger of workers from falling objects</p> <p>(ix) First-aid measures in the event of occupational accidents</p> <p style="text-align: right;">【Article 539-5】</p> <p>(c) When carrying out rope aerial works, the Contractor shall appoint an Operation Leader and have the personnel direct the task based on the Particular Method Statement described in the previous section and perform the following matters:</p> <p style="text-align: right;">【Article 539-6】</p> <p>(i) Inform all workers of the content of the Particular Method Statement and the Particular Health and Safety Plan before commencement of the works,</p> <p style="text-align: right;">【Article 539-5(3)】</p> <p>(ii) Check the equipment used on the day before the commencement of the work, and repair or replace it immediately when any abnormality is identified,</p>		<p>(d) Ensure that main ropes have be bound to two or more different strong supports.</p> <p>(e) Ensure that the labors' fall arrest systems have to be securely attached to body-retaining devices. In addition, the connecting device must be compatible with the main ropes used.</p> <p style="text-align: right;">【Article 539-3(2)】</p> <p>(3) Procedure of work</p> <p>(a) Survey before commencing work</p> <p>The contractor shall check the following points about their work places in advance and record the results.</p> <p>(i) Work locations and the conditions below them,</p> <p>(ii) Position, state, and surrounding conditions of each support for fixing main ropes and life lines,</p> <p>(iii) Situation of passages leading to work places and supports, and,</p> <p>(iv) The presence or absence of points where there is a risk of disconnection on main ropes or life lines, and their positions and conditions.</p> <p style="text-align: right;">【Article 539-4】</p> <p>(b) The Particular Method Statement or Particular Health and Safety Plan</p> <p>When carrying out rope aerial works, the contractor shall prepare the Particular Method Statement and the Particular Health and Safety Plan based on the survey in the previous section and shall inform labors about the following matters described in those plans.</p> <p>(i) Method and order of the work</p> <p>(ii) Number of labors engaged in the work</p> <p>(iii) Location of each support that is used to bind the main ropes and lifelines</p> <p>(iv) Types and strengths of the main ropes etc. to be used</p> <p>(v) Length of the main ropes and lifelines to be used</p> <p>(vi) Points where the ropes may be severed and measures to prevent this</p> <p>(vii) Measures to prevent labors engaged in binding the main ropes and lifelines to the supports from falling</p> <p>(viii) Measures to prevent the danger of labors from falling objects</p> <p>(ix) First-aid measures in the event of occupational accidents</p> <p style="text-align: right;">【Article 539-5】</p> <p>(c) When carrying out rope aerial works, the Contractor shall appoint an Operation Leader and have the personnel direct the task based on the Particular Method Statement described in the previous section and perform the following matters:</p> <p style="text-align: right;">【Article 539-6】</p> <p>(i) Inform all labors of the content of the Particular Method Statement and the Particular Health and Safety Plan before commencement of the works,</p> <p style="text-align: right;">【Article 539-5(3)】</p> <p>(ii) Check the equipment used on the day before the commencement of the work, and repair or replace it immediately when any abnormality is identified,</p>
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<p style="text-align: right;">【Article 539-9】</p> <p>(iii) Have the workers start work after the measures have been taken for main ropes & life lines, fall arrest systems and protective helmets,</p> <p style="text-align: right;">【Article 539-6-1】</p> <p>(iv) Have workers use fall arrest systems. And, have them fix the fall arrest systems to the life lines, and,</p> <p style="text-align: right;">【Article 539-7(2)】</p> <p>(v) Have workers wear protective helmets to prevent accidents due to flying or falling objects.</p> <p style="text-align: right;">【Article 539-8】</p> <p>(d) Appoint workers (other than support workers) who have completed the special educations prescribed in the General Rules to carry out rope aerial work.</p> <p style="text-align: right;">【New description】</p> <p style="text-align: right;">※Article 539 has a revised version in Jap.</p>		<p style="text-align: right;">【Article 539-9】</p> <p>(iii) Have the labors start work after the measures have been taken for main ropes & life lines, fall arrest systems and protective helmets,</p> <p style="text-align: right;">【Article 539-6-1】</p> <p>(iv) Have labors use fall arrest systems. And, have them fix the fall arrest systems to the life lines, and,</p> <p style="text-align: right;">【Article 539-7(2)】</p> <p>(v) Have labors wear protective helmets to prevent accidents due to flying or falling objects.</p> <p style="text-align: right;">【Article 539-8】</p> <p>(d) Appoint labors (other than support labors) who have completed the special educations prescribed in the General Rules to carry out rope aerial work.</p> <p style="text-align: right;">【New description】</p> <p style="text-align: right;">※Article 539 has a revised version in Jap.</p>
<p>2.5.7 Measures for Workers</p> <p>The Contractor shall provide the following measures to workers for preventing falls.</p> <p>(1) For newly arrived workers, conduct safety education before starting work on locations and operations at a risk of falling,</p> <p>(2) Before starting work, instruct workers on the places where there is a risk of falling,</p> <p>(3) Educate and instruct the prohibition of unauthorized removal of fall prevention facilities and enclosures,</p> <p>(4) Instruct on storage and management of protective equipment including fall arrest system,</p> <p>(5) For workers engaged in aerial work, consider their age, physical strength, etc., and in particular check health conditions and arrange them,</p> <p>(6) In aerial work, avoid the placement of unskilled or elderly personnel, and,</p> <p style="text-align: right;">【(1)-(6): New description】</p> <p>(7) Stop the work at the working spaces with 2m or more in height if there is a risk of carrying out operations due to bad weather such as strong wind, heavy rain, or heavy snow.</p> <p style="text-align: right;">【Article 522】</p>		<p>2.5.7 Measures for Labors</p> <p>The Contractor shall provide the following measures to labors for preventing falls.</p> <p>(1) For newly arrived labors, conduct safety education before starting work on locations and operations at a risk of falling,</p> <p>(2) Before starting work, instruct labors on the places where there is a risk of falling,</p> <p>(3) Educate and instruct the prohibition of unauthorized removal of fall prevention facilities and enclosures,</p> <p>(4) Instruct on storage and management of protective equipment including fall arrest system,</p> <p>(5) For labors engaged in aerial work, consider their age, physical strength, etc., and in particular check health conditions and arrange them,</p> <p>(6) In aerial work, avoid the placement of unskilled or elderly personnel, and,</p> <p style="text-align: right;">【(1)-(6): New description】</p> <p>(7) Stop the work at the working spaces with 2m or more in height if there is a risk of carrying out operations due to bad weather such as strong wind, heavy rain, or heavy snow.</p> <p style="text-align: right;">【Article 522】</p>

<p>2.5.8 Protective Equipment for Preventing Falls</p> <p>The Contractor shall comply with the following when having workers use fall arrest systems.</p> <ol style="list-style-type: none"> (1) In principle, fall arrest system should be of the full harness type. However, when there is a risk of the workers reaching the ground at the time of falling (When the total length of free fall distance, extension of shock absorber and safe separation distance (1 m) when full harness type is used exceeds working height), The Contractor may have workers use the body belt type fall arrest system. (2) Fall arrest system shall withstand the total weight of the worker who put on the fall arrest system and the weight of it. (3) For shock absorbers, select an appropriate specification and type according to the free fall distance assumed from the worker's working condition (height of connector installation equipment, length of lanyard, etc.). (4) Fall arrest system shall be such that the type of fall arrester on which the name of the manufacturer and the date of manufacture are displayed in an easy-to-see place. (5) Protective equipment and equipment other than the above <p>Notwithstanding the above, it is possible to have workers use protective equipment in accordance with the following standard for protective equipment and equipment concerning fall prevention.</p> <p>Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.</p> <p>※2.5.8 is stipulated based on the “Guidelines for the safe use of Fall Arrest System” taken effect on June 22, 2018. It has no English translated version.</p>	<p>NKFI: Japanese description added to 2.5.8(6) is as follows: 「墜落制止用器具を使用する作業の開始前には、墜落制止用器具及びその取付け設備等の機能を点検し、不良品を取り除くこと。」</p>	<p>2.5.8 Protective Equipment for Preventing Falls</p> <p>The Contractor shall comply with the following when having labors use fall arrest systems.</p> <ol style="list-style-type: none"> (1) In principle, fall arrest system should be of the full harness type. However, when there is a risk of the labors reaching the ground at the time of falling (When the total length of free fall distance, extension of shock absorber and safe separation distance (1 m) when full harness type is used exceeds working height), The Contractor may have labors use the body belt type fall arrest system. (2) Fall arrest system shall withstand the total weight of the labor who put on the fall arrest system and the weight of it. (3) For shock absorbers, select an appropriate specification and type according to the free fall distance assumed from the labor's working condition (height of connector installation equipment, length of lanyard, etc.). (4) Fall arrest system shall be such that the type of fall arrester on which the name of the manufacturer and the date of manufacture are displayed in an easy-to-see place. (5) Protective equipment and equipment other than the above <p>Notwithstanding the above, it is possible to have workers use protective equipment in accordance with the following standard for protective equipment and equipment concerning fall prevention.</p> <p>Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.</p> <ol style="list-style-type: none"> (6) Inspection of fall arrest systems and facilities related Before starting work using fall arrest systems, its system and facilities to attach fall arrest systems shall be inspected and remove defective parts when identified. 【→2.5.3(2)(c)】 <p>※2.5.8 is stipulated based on the “Guidelines for the safe use of Fall Arrest System” taken effect on June 22, 2018. It has no English translated version.</p>
	<p>NKFI: based on Mr. MD’s advice, added 2.5.9 and 2.5.10.</p> <p>NKFI: For drafting 2.5.9, quoted with reference to article 527 & 528, OISH as well as The Work at Height Regulations 2005, UK.</p>	<p>2.5.9 Safe Use of Movable Ladders or Stepladders</p> <p>The Contractor shall comply with the following when having labors use movable ladders or stepladders.</p> <ol style="list-style-type: none"> (1) Structure and specification of movable ladders The employer shall not use movable ladders unless otherwise prescribed as follows: <ol style="list-style-type: none"> (a) To be of sound structure. (b) To be made of materials without marked damage, corrosion, etc. (c) To have the width of 30 cm or wider. (d) To set slip-proof device or to take other measures to prevent the foot displacement. 【Article 527】 (2) Structure and specification of stepladders The employer shall not use stepladders unless otherwise prescribed as follows: <ol style="list-style-type: none"> (a) To be of sound structure.

		<p>(b) To be made of materials without marked damage, corrosion, etc.</p> <p>(c) To have the angle made by the foot and the floor of 75 degrees or less, and for folding stepladders, to be equipped with fittings, etc., to keep the angle made by the foot and the floor secure.</p> <p>(d) To be equipped with steps having an area sufficient for safe operation.</p> <p style="text-align: right;">【Article 528】</p> <p>(3) Use of movable ladders or stepladders</p> <p>(a) Any surface upon which a ladder rests shall be stable, firm, of sufficient strength and of suitable composition safely to support the ladder so that its rungs or steps remain horizontal, and any loading intended to be placed on it.</p> <p>(b) A ladder shall be so positioned as to ensure its stability during use.</p> <p>(c) A suspended ladder shall be attached in a secure manner and so that, with the exception of a flexible ladder, it cannot be displaced and swinging is prevented.</p> <p>(d) A portable ladder shall be prevented from slipping during use by—</p> <p>(i) Securing the stiles at or near their upper or lower ends;</p> <p>(ii) An effective anti-slip or other effective stability device; or</p> <p>(iii) Any other arrangement of equivalent effectiveness.</p> <p>(e) A ladder used for access shall be long enough to protrude sufficiently above the place of landing to which it provides access, unless other measures have been taken to ensure a firm handhold.</p> <p>(f) No interlocking or extension ladder shall be used unless its sections are prevented from moving relative to each other while in use.</p> <p>(g) A mobile ladder shall be prevented from moving before it is stepped on.</p> <p>(h) Where a ladder or run of ladders rises a vertical distance of 9 m or more above its base, there shall, where reasonably practicable, be provided at suitable intervals sufficient safe landing areas or rest platforms.</p> <p>(i) Every ladder shall be used in such a way that—</p> <p>(i) A secure handhold and secure support are always available to the user; and</p> <p>(ii) The user can maintain a safe handhold when carrying a load unless, in the case of a step ladder, the maintenance of a handhold is not practicable when a load is carried, and a risk assessment under regulation 3 of the Management Regulations has demonstrated that the use of a stepladder is justified because of the low risk and the short duration of use.</p> <p>【SCHEDULE 6 REQUIREMENTS FOR LADDERS, The Work at Height Regulations 2005, UK】 https://www.legislation.gov.uk/uksi/2005/735/schedule/6/made</p>
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JICA standard Safety Specification Preparation Study
2.6 Preventing Measures for Flying and Falling Objects (English 1st Draft)

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Specification in Japanese (Provisional Final Version R0)	English Translation (Provisional Final Version R0)	Comment / Revised by M. D
<p>2 安全措置一般</p> <p>2.6 飛来落下の防止措置 請負者は、作業のため物体が飛来又は落下(以下、「飛来落下」という。)することにより、工事関係者又は第三者に危険が及ぶことを防止するために、以下の措置を講じなければならない。</p> <p>2.6.1 物体の落下による危険防止のための措置</p> <p>(1) 請負者は、作業場所における物体の落下による危険を防止する次の措置を講じなければならない。</p> <p>(a) 作業により物体が落下することで、下部にいる請負者の要員に危険が及ぶおそれのある作業場所の端及び開口部にメッシュシート (Debris net) 又は高さ 10cm 以上の幅木を設置すること。</p> <p>(b) 作業の性質上メッシュシート若しくは幅木を設けることが著しく困難な場合又は臨時にメッシュシート若しくは幅木を取り外す場合は、立入禁止区域を設定すること。</p> <p>(c) 構造物の出入口と外部足場が交差する場所の出入口上部には物体の落下防止の防護棚を設置すること、併せて出入口には安全な通路を指定すること。</p> <p>(d) 物体の落下防止のためのメッシュシートの使用及び管理は次であること。</p> <p>(i) メッシュシートは、網目の寸法 12mm 以下又は想定される落下物の落下防止に応じた網目の寸法で、落下物による破損が生じない強度を有する、物体の落下防止を目的とするものを使用すること。</p> <p>(ii) メッシュシートに網目の乱れ、破損があるものは使用しないこと。</p> <p>(iii) 作業の都合上、メッシュシートを取りはずしたときは当該作業終了後すみやかに復元すること。</p> <p>(iv) メッシュシートは、少なくとも毎週 1 回は点検し、破損等があった場合には直ちに補修すること。</p> <p>(v) メッシュシート上に、落下物があるときは、作業前に落下物を除去すること。</p> <p>(2) 請負者は、作業場所が道路又は民家等に近接していて、物体の落下による危険が第三者に及ぶおそれがある場合は、次の措置を講じなければならない。</p>	<p>2. General Safety Measures</p> <p>2.6 Preventing Measures for Flying and Falling Objects The Contactor shall take measures for preventing danger to the Contractor's personnel at a workplace or the third parties due to the object flying or falling from the height by the work.</p> <p>2.6.1 Measures to Prevent Danger from Falling Objects</p> <p>(1) For preventing danger due to falling objects at the work place, the Contractor shall:</p> <p>(a) Install a mesh sheet (debris net) or a baseboard with a height of 10 cm or more at the edge and opening of the work area that may cause danger to the Contractor's Personnel underneath by the object falling during the work.</p> <p>(b) Establish a prohibited entry area if it is extremely difficult to provide a mesh sheet or baseboard due to the nature of the work, or if the mesh sheet or baseboard is to be removed temporarily.</p> <p>(c) Install a protective shelf for preventing objects from falling above the entrance / exit of the structure where the entrance / exit crosses the external scaffolding, and in addition, establish a safe passage for the entrance / exit.</p> <p>(d) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(i) The mesh sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the expected falling objects, and has the strength to prevent damage caused by falling objects.</p> <p>(ii) Mesh sheets that have mesh irregularities or breakage shall not be used.</p> <p>(iii) If a mesh sheet is removed temporarily due to the convenience of the work, it must be restored immediately after the work is completed.</p> <p>(iv) Mesh sheets shall be inspected at least once a week and repaired immediately if any damage is found.</p> <p>(v) If there is a fallen object on the mesh sheet, it must be removed before the work starts.</p>	

Specification in Japanese (Provisional Final Version R0)	English Translation (Provisional Final Version R0)	Comment / Revised by M. D
<p>(a) 上記(a)から(c)と同様の措置を講ずること。</p> <p>(b) 現場に近接する歩道には防護柵又は仮設屋根を設置すること。</p> <p>(c) 一時的に上記の措置が取れないときは、安全な通路又は迂回路を設置するとともに誘導員を配置し、通行車両及び歩行者の安全を確保すること。</p>	<p>(2) When the work place is close to a road or a private house and where there is a risk that falling objects may cause danger to the third parties, the Contractor shall:</p> <p>(a) Take the same measures as (a) to (c) above.</p> <p>(b) Install protective shelves or temporary roofs on the sidewalk close to the site</p> <p>(c) Install a safe passage or detour, if the above measures cannot be taken temporarily, and place a flagman to ensure the safety of passing vehicles and pedestrians.</p>	
<p>2.6.2 作業による飛来物による危険防止のための措置</p> <p>(1) 請負者は、飛来による危険が予想されるコンクリートの破砕作業、グラインダー等を使用する研削作業においては、次の飛来防止措置を講じなければならない。</p> <p>(a) 飛来物が発生する場所を必要に応じ覆うなどの飛来防止措置を講ずること。</p> <p>(b) 研削作業の手順、工具の破断に伴う危険防止等の措置については、本仕様書 4.1[建設機械作業の一般的留意事項]の規定に従うこと。</p> <p>(c) 保護帽、保護メガネ等の飛来物による危険防止の保護具を使用させること。</p> <p>(2) 強風時には、本仕様書 2.7.6[強風及び暴風に対する措置]に従い、資材等の飛散防止の措置をとること。</p>	<p>2.6.2 Measures to Prevent Danger from Flying Objects during Work</p> <p>(1) For works such as concrete crushing work and grinder operation that are anticipated dangers due to flying objects, the Contractor shall:</p> <p>(a) Take preventive measures such as covering the place where flying objects occur as necessary</p> <p>(b) Follow the provisions of 4.1 of this Specification [General Notes on Construction Equipment Work] for grinding work procedures and preventing danger due to tool breakage etc. and,</p> <p>(c) Have the workers use protective equipment such as protective caps and protective glasses to prevent danger from flying objects.</p> <p>(2) In strong winds, the Contractor shall take measures to prevent flying of materials, etc. according to 2.7.6 [Measures against Strong Wind and Storm] in this Specification.</p>	
<p>2.6.3 物体投下による危険防止のための措置</p> <p>請負者は、高所からの物体投下による請負者の要員への危険を防止するために、次の措置を行わなくてはならない。</p> <p>(1) 高さ3m以上の高所からの物体の投下を行わないこと。</p> <p>(2) やむを得ず高さ3m以上の高所から物体を投下する場合には、シュートを設置すること。また、立入禁止区域の設定、又は監視員の配置を行うこと。</p> <p>(3) シュートは、周囲に投下物が飛散しない構造とすること。</p> <p>(4) シュート先端と地上との間隔は投下物が飛散しないように、シュートの長さ、勾配を考慮した設備とすること。</p>	<p>2.6.3 Measures to Prevent Danger from Dropping Objects Work</p> <p>In order to prevent danger to the Contractor's Personnel from dropping objects from high places, the Contractor shall:</p> <p>(1) Prohibit to drop objects from a height of 3m or more.</p> <p>(2) Install a chute, if it is unavoidable to drop an object from a height of 3m or more, and establish a prohibited entry area or assign a spotter.</p> <p>(3) Use a chute that is structured so that the dropped objects will not scatter in the surrounding area.</p> <p>(4) Adjust the distance between the chute tip and the ground by devising the chute length and gradient so that the thrown object will not scatter.</p>	

Specification in Japanese (Provisional Final Version R0)	English Translation (Provisional Final Version R0)	Comment / Revised by M. D
<p>2.6.4 高所の作業場所の材料等の集積による危険防止のための措置</p> <p>請負者は、足場の上等の高所の作業場所において、材料、器具、工具等(以下、「材料等」という。)を集積する場合は、物体の落下による危険防止のために、次の措置を行わなくてはならない。</p> <p>(1) 足場、鉄骨等の物体の落下しやすい高所には物を集積しないこと。</p> <p>(2) 作業床端、開口部等の1m以内には、材料等を集積しないこと。</p> <p>(3) 高所作業場所に材料等を仮置きする場合は、材料等をロープ掛けやシート掛け等により、風、振動等による落下を防止すること。</p> <p>(4) 飛散しやすい物を仮置きする場合にはロープ等で緊結するか、箱、袋に収納すること。</p>	<p>2.6.4 Measures to Prevent Danger by Accumulated Materials, etc. at High Work Places</p> <p>When materials, instruments, tools, etc. (hereinafter referred to as “materials” in this section) are accumulated at a high work place on the scaffolding etc., in order to prevent danger from falling objects, the Contractor shall:</p> <p>(1) Prohibit from accumulating materials at high places such as scaffolding and steel frames where objects are likely to fall.</p> <p>(2) Prohibit from accumulating materials within 1m of work floor edge, opening, etc.</p> <p>(3) Prevent temporarily placed materials in a high work place from falling due to wind, vibration, etc. by means of fixing them with ropes or sheets.</p> <p>(4) When temporarily placing items that are likely to scatter, tie them together with a rope or store them in a box or bag.</p>	
<p>2.6.5 上下作業時の落下物による危険防止のための措置</p> <p>請負者は、原則として上下作業は行ってはならない。但し、やむを得ず実施する場合は以下の措置を講じなければならない。</p> <p>(1) 事前に上下作業の責任者間で作業の場所、内容、時間等をよく調整し、安全確保を図ること。</p> <p>(2) 2.6.1[物体の落下による危険防止のための措置] および 2.6.4[高所の作業場所の材料等の集積による危険防止のための措置]に規定する措置に加えて、工具、材料等を落下させないように、作業者につり網、つり袋等を使用させる等の安全確保を講ずること。</p> <p>(3) 危険防止措置の実施が困難な場合には、監視員を適宜配置すること。</p>	<p>2.6.5 Measures to Prevent Danger from Falling Objects When Working Above and Underneath Other Workers</p> <p>As a general rule, the Contractors shall not allow his personnel to work above and underneath other workers. However, if it is unavoidable, the Contractor shall:</p> <p>(1) Ensure safety by carefully coordinating the location, content, time, etc. of the work between the persons in charge of the work beforehand.</p> <p>(2) In addition to the measures stipulated in 2.6.1 [Measures to Prevent Danger from Falling Objects] and 2.6.4[Measures to Prevent Danger by Accumulated Materials, etc. at High Work Places], take measures to prevent materials from falling by instructing his personnel to use hanging nets and/or hanging bags.</p> <p>(3) Assign a spotter as appropriate when it is difficult to take measures for preventing danger.</p>	

JICA standard Safety Specification Preparation Study
2.6 Preventing Measures for Flying and Falling Objects (English 2nd Draft)

2019.8.26 NK Draft R1
2019.9.5 Japanese Prov. Final
2019.11.5 NK Draft R2

Specification in Japanese (Provisional Final 9/5) Parts underlined are revised.	English Translation (Draft R1 8/26) Parts underlined are revised.	English Translation (Draft R2 11/4) Parts underlined are revised.
<p>2 安全措置一般</p> <p>2.6 飛来落下の防止措置 請負者は、作業のため物体が飛来又は落下(以下、「飛来落下」という。)することにより、工事関係者又は第三者に危険が及ぶことを防止するために、以下の措置を講じなければならない。</p> <p>2.6.1 物体の落下による危険防止のための措置</p> <p>(1) 請負者は、作業場所における物体の落下による危険を防止する次の措置を講じなければならない。</p> <p>(a) 作業により物体が落下することで、下部にいる請負者の要員に危険を及ぼすおそれのある作業場所の端及び開口部にメッシュシート (Debris net) 又は高さ 10cm 以上の幅木を設置すること。</p> <p>(b) 作業の性質上メッシュシート若しくは幅木を設けることが著しく困難な場合又は臨時にメッシュシート若しくは幅木を取り外す場合は、立入禁止区域を設定すること。</p> <p>(c) 構造物の出入口と外部足場が交差する場所の出入口上部には物体の落下防止の防護棚を設置すること、併せて出入口には安全な通路を指定すること。</p> <p>(d) 物体の落下防止のためのメッシュシートの使用及び管理は次であること。</p> <p>(i) メッシュシートは、網目の寸法 12mm 以下又は想定される落下物の落下防止に応じた網目の寸法で、落下物による破損が生じない強度を有する、物体の落下防止を目的とするものを使用すること。</p> <p>(ii) メッシュシートに網目の乱れ、破損があるものは使用しないこと。</p> <p>(iii) 作業の都合上、メッシュシートを取りはずしたときは当該作業終了後すみやかに復元すること。</p> <p>(iv) メッシュシートは、少なくとも毎週 1 回は点検し、破損等があった場合には直ちに補修すること。</p> <p>(v) メッシュシート上に、落下物があるときは、作業前に落下物を除去すること。</p> <p>(2) 請負者は、作業場所が道路又は民家等に近接して、物体の落下による危険が第三者に及ぶおそれがある場合は、次の措置を講じなければならない。</p> <p>(a) 上記(a)から(c)と同様の措置を講ずること。</p>	<p>2. General Safety Measures</p> <p>2.6 Preventing Measures for Flying and Falling Objects The Contactor shall take measures for preventing danger to the Contractor's personnel at a workplace or the third parties due to the object flying or falling from the height by the work.</p> <p>2.6.1 Measures to Prevent Danger from Falling Objects</p> <p>(1) For preventing danger due to falling objects at the work place, the Contractor shall:</p> <p>(a) Install a mesh sheet (debris net) or a baseboard with a height of 10 cm or more at the edge and opening of the work area that may cause danger to the Contractor's Personnel underneath by the object falling during the work.</p> <p>(b) Establish a prohibited entry area if it is extremely difficult to provide a mesh sheet or baseboard due to the nature of the work, or if the mesh sheet or baseboard is to be removed temporarily.</p> <p>(c) Install a protective shelf for preventing objects from falling above the entrance / exit of the structure where the entrance / exit crosses the external scaffolding, and in addition, establish a safe passage for the entrance / exit.</p> <p>(d) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(i) The mesh sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the expected falling objects, and has the strength to prevent damage caused by falling objects.</p> <p>(ii) Mesh sheets that have mesh irregularities or breakage shall not be used.</p> <p>(iii) If a mesh sheet is removed temporarily due to the convenience of the work, it must be restored immediately after the work is completed.</p> <p>(iv) Mesh sheets shall be inspected at least once a week and repaired immediately if any damage is found.</p> <p>(v) If there is a fallen object on the mesh sheet, it must be removed before the work starts.</p> <p>(2) When the work place is close to a road or a private house and where there is</p>	<p>2. General Safety Measures</p> <p>2.6 Preventing Measures for Flying and Falling Objects The Contactor shall take measures for preventing danger to the Contractor's personnel at a workplace or the third parties due to the object flying or falling from the height by the work.</p> <p>2.6.1 Measures to Prevent Danger from Falling Objects</p> <p>(1) For preventing danger due to falling objects at the work place, the Contractor shall:</p> <p>(a) Install a mesh sheet (debris net) or a baseboard toeboard with a height of 10 cm or more at the edge and opening of the work area that may cause danger to the Contractor's Personnel underneath by the object falling during the work.</p> <p>(b) Establish a prohibited entry area if it is extremely difficult to provide a mesh sheet or baseboard due to the nature of the work, or if the mesh sheet or baseboard is to be removed temporarily.</p> <p>(c) Install a protective shelf for preventing objects from falling above the entrance / exit of the structure where the entrance / exit crosses the external scaffolding, and in addition, establish a safe passage for the entrance / exit.</p> <p>(d) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(i) The mesh sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the expected falling objects, and has the strength to prevent damage caused by falling objects.</p> <p>(ii) (ii) Mesh sheets that have mesh irregularities or breakage shall not be used.</p> <p>(iii) (iii) If a mesh sheet is removed temporarily due to the convenience of the work, it must be restored immediately after the work is completed.</p> <p>(iv) Mesh sheets shall be inspected at least once a week and repaired immediately if any damage is found.</p> <p>(v) If there is a fallen object on the mesh sheet, it must be removed before the work starts.</p> <p>(2) When the work place is close to a road or a private house and where there is</p>

JICA standard Safety Specification Preparation Study
2.7 Measures against Adverse Weather and Earthquakes (English R0)

2019.9.5 JICA PFD-J
2019.9.9 NK R0

JSSS in Japanese (Provisional Final Draft JR0 9/5)	JSSS in English R0 (Provisional Final Draft 9/9) translated by NK	Comment / Revised by M D
<p>2. 安全措置一般</p> <p>2.7 悪天候及び地震時の対策</p> <p>2.7.1 悪天候及び地震時の緊急事態対応計画</p> <p>請負者は、本仕様書 1.10[緊急事態対応計画及び緊急通報体制]の規定に従い、本節 2.7.4(1)に規定する強風、暴風、大雨、大雪、雷、地震を対象にした緊急事態対応計画を、作成しなければならない。</p> <p>大雨により土石流、異常出水、斜面崩壊、落石等が予見される現場においては、緊急事態対応計画に、それらへの対応を記載しなければならない。</p>	<p>2. General Safety Measures</p> <p>2.7 Measures against Adverse Weather and Earthquakes</p> <p>2.7.1 Emergency Response Plan for Adverse Weather and Earthquakes</p> <p>The Contractor shall create the emergency response plan for strong winds, storms, heavy rains, heavy snowfalls, lightning and earthquakes defined in 2.7.4 (1) for preparing the emergency response plan and emergency notification system specified in 1.10 of JSSS.</p> <p>In a site where debris flow, abnormal runoff, slope collapse and rock fall by heavy rain are predicted, the Contractor shall include actions against the occurrence in the emergency response plan.</p>	
<p>2.7.2 悪天候及び地震に備えた準備と点検</p> <p>請負者は、悪天候及び地震に備え、次の準備を行わなくてはならない。</p> <p>(1) 気象及び地震情報を常時テレビ、ラジオ、インターネット等で入手すること。</p> <p>(2) 電話、無線機、トランシーバー、拡声器、サイレン等、緊急時の連絡設備を常備すること。かかる連絡設備は、緊急時に使用できるよう常に点検整備しておくこと。</p> <p>(3) 停電に対応できるように非常電源設備を設置し、定期的に点検整備をしておくこと。</p> <p>(4) 悪天候及び地震時の退避場所や避難ルートについて計画し、請負者の要員に周知しておくこと。</p> <p>(5) 悪天候、地震及び津波に関する情報の伝達、及び請負者の要員のとるべき行動に関し、本仕様書 1.10 (3)に規定する訓練を行うこと。</p>	<p>2.7.2 Gathering Weather and Earthquake Information and Response</p> <p>The Contractor shall prepare for the followings in case of adverse weather and earthquakes:</p> <p>(1) Always obtain weather and earthquake information on TV, radio, internet, etc.</p> <p>(2) Always have emergency contact facilities ready such as telephones, radios, transceivers, loudspeakers, sirens, etc. Such communication facilities shall be inspected and maintained at all times so that it can be used in an emergency.</p> <p>(3) Install emergency power supply equipment to deal with power outages and perform regular maintenance.</p> <p>(4) Plan for evacuation routes and sites in case of adverse weather and earthquakes, and disseminate them to the Contractor's Personnel.</p> <p>(5) Conduct training as provide in 1.10 (3) regarding the communication of information on adverse weather, earthquakes and tsunamis, and actions to be taken by the Contractor Personnel.</p>	
<p>2.7.3 気象及び地震情報の収集と対応</p> <p>請負者は、気象及び地震情報の収集と気象の変化及び地震の発生に対応するため、次の措置を講じなければならない。</p> <p>(1) 本仕様書 2.7.4 (1)(a)から(d)に示す強風、暴風、大雨、大雪、もしくはそれに準ずる天候(以下、「悪天候」という。)が予想されるときは、継続的に降雨量や風速等の悪天候に係わる気象情報を確認すること。</p> <p>(2) 気象及び地震情報に基づき、必要に応じて本仕様書 2.7.4 から 2.7.9 に記載の対応をとること。また、本仕様書 1.10 (2)に規定する緊急連絡表で指定された関係者に通知すること。</p>	<p>2.7.3 Collect Information about Weather and Earthquake and Response</p> <p>For collecting weather and earthquake information and responding to changes in weather condition and occurrence of earthquakes, the Contractor shall:</p> <p>(1) Check continuously the weather information regarding rainfall and wind speed etc. when adverse weather is anticipated such as strong winds, storms, heavy rains, heavy snowfalls or similar weather (hereinafter referred to as "adverse weather") as provide in 2.7.4 (a) to (d).</p> <p>(2) Take the measures specified 2.7.4-2.7.9 as necessary based on weather and earthquake information. In addition, notify the relevant parties specified in the emergency contact list prescribed in 1.10 (2).</p>	

JSSS in Japanese (Provisional Final Draft JR0 9/5)	JSSS in English R0 (Provisional Final Draft 9/9) translated by NK	Comment / Revised by M D
<p>2.7.4 作業の中止と再開</p> <p>請負者は、悪天候及び地震により事故が発生することを防ぐために、次の措置を講じなければならない。</p> <p>(1) 当該国の法律に定めがない限り、悪天候及び地震による作業の中止の基準は次を目安として定めること。</p> <p>(a) 強風： 10 分間の平均風速が毎秒 10 メートル以上の風</p> <p>(b) 暴風： 瞬間風速が毎秒 30 メートルを超える風</p> <p>(c) 大雨： 1 回の降雨量が 50 ミリメートル以上の雨</p> <p>(d) 大雪： 1 回の降雪量が 25 センチメートル以上の雪</p> <p>(e) 地震： メルカリ震度階VI以上の地震</p> <p>(2) 天気予報等であらかじめ上記基準を超える悪天候が予想される場合は、緊急事態対応計画に従い、作業中止を含めた対応策の準備を行っておくこと。</p> <p>(3) 悪天候のときは 2m 以上の高所作業を中止すると共に、その旨エンジニアに通知すること。</p> <p>(4) 降雨、降雪及び霧発生時の視界不良により、作業に危険を及ぼす可能性がある場合は、当該作業を中止すると共に、その旨エンジニアに通知すること。</p> <p>(5) 悪天候又は地震発生後に作業を再開する前には、構造物(仮設を含む)に危険がないかを点検すること。危険箇所が発見された場合には、すみやかに危険箇所に立入禁止措置を講じ、その旨をエンジニアに通知すること。</p> <p>(6) 悪天候又は地震発生後に作業を再開する前には、建設機械に危険がないかを点検すること。危険が発見された場合には、必要な修理を施した上で使用すること。</p>	<p>2.7.4 Discontinuation and Resumption of Work</p> <p>In order to prevent accidents due to adverse weather and earthquake, the Contractor shall:</p> <p>(1) Determine the criteria for discontinuation of works due to adverse weather and earthquake referring to the followings as a guide unless otherwise specified in the Law of the Country.</p> <p>(a) Strong wind: ten minutes average wind speed is 10 meters per second or more</p> <p>(b) Storm: instantaneous wind speed exceeds 30 meters per second</p> <p>(c) Heavy rain: rain of 50 mm or more per rainfall</p> <p>(d) Heavy snowfall: snowfall of 25 cm or more per snowfall</p> <p>(e) Earthquake: an earthquake of Mercalli seismic scale VI or higher</p> <p>(2) Prepare for measures to cope with adverse weather including discontinuation of work according to the emergency response plan if a weather exceeding the above criteria is predicted by weather forecast etc.</p> <p>(3) Stop work at heights of 2 m or more in adverse weather and inform it to the Engineer accordingly.</p> <p>(4) Stop the work if there is a possibility that work may be dangerous due to poor visibility during rain, snow or fog, and inform it to the Engineer accordingly.</p> <p>(5) Inspect the structures (including temporary structures) for danger before resuming work after adverse weather or earthquake. If any dangerous spot is found, promptly take no-entry measures and inform it to the Engineer accordingly.</p> <p>(6) Inspect the construction equipment for danger before resuming work after adverse weather or earthquake. If any danger is found, use it after making the necessary repairs.</p>	
<p>2.7.5 大雨に対する措置</p> <p>請負者は、作業現場及び周辺では、2.7.4(1)に規定する大雨に対し、次の措置を講じなければならない。</p> <p>(1) 次のような箇所は、下記(2)から(4)の対策及び立入禁止の措置を講ずること。</p> <p>(a) 土砂崩れ、がけ崩れ、地すべりの発生のおそれがある箇所及び土石流の到達のおそれがある箇所</p> <p>(b) 資機材の流出、土砂の流出のおそれがある箇所</p> <p>(c) 河川の氾濫等により浸水のおそれがある箇所</p> <p>(2) 流出のおそれのある資機材等は、安全な場所へ移動する等流出防止の措置を講ずること。</p> <p>(3) 大型機械の設置してある場所で、機械等の冠水又は流出、地盤のゆるみに</p>	<p>2.7.5 Measures for Heavy Rain</p> <p>For heavy rainfall prescribed in 2.7.4 (1) at the Site and in the surrounding area, the Contractor shall:</p> <p>(1) Take measures for non-entry and setting signs as necessary at the following places:</p> <p>(a) Places where landslides and slope collapse are anticipated and where there is a risk of debris flow reaches</p> <p>(b) Places where there is a risk of outflow of material and equipment and soil runoff</p> <p>(c) Places where there is a risk of damage due to flooding of a river</p>	

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<p>よる転倒のおそれがある場合は、適切な場所への退避又は転倒防止措置を講じること。</p> <p>(4) 冠水又は流出のおそれがある仮設物は、撤去するか、水裏から仮設物内に水を呼び込み内外水位差による倒壊を防ぐか、補強するなどの措置を講じること。</p>	<p>(2) Take measures such as moving materials and equipment to a safe place for preventing them from being washed away.</p> <p>(3) Take measures such as evacuation of large equipment to a proper place if there is a risk of submersion or outflow of them and overturning of the equipment due to loosening of the ground.</p> <p>(4) If there is a risk of submersion or outflow, protect temporary facilities by means such as moving them to a safe place or reinforcing the facilities, or drawing water from behind the temporary structures to prevent collapsing due to water level difference between inside and outside.</p>	
<p>2.7.6 強風及び暴風に対する措置</p> <p>請負者は、作業現場及び周辺では、2.7.4(1)で規定する強風又は暴風に対し、次の措置を講じなければならない。</p> <p>(1) クレーン、杭打機等のような風圧を大きく受ける大型建設機械には、転倒、逸走防止の措置を講じること</p> <p>(2) 大型建設機械は、高圧電線の大きな振れによる接触が発生しないように、電線類から十分な距離をとって退避させておくこと。</p> <p>(3) 足場に対して、次の対策を行うこと。</p> <p>(a) 風荷重が大きくなるメッシュシート等の撤去又はたたむこと</p> <p>(b) 足場等の滑動防止、壁つなぎの補強等</p> <p>(c) 建築物より突出している足場等の控え索や控え材等での補強</p> <p>(d) 足場上にある資材等の固縛又は地上への移動</p> <p>(4) 高所作業での作業を中断すること。また、物の飛散が予想されるときは、飛散防止措置を施すこと。</p>	<p>2.7.6 Measures for Strong Wind and Storm</p> <p>For strong wind and storm prescribed in 2.7.4 (1) at the Site and in its surrounding area, the Contractor shall:</p> <p>(1) Take measures to prevent overturns and run-off of large equipment such as cranes and pile drivers.</p> <p>(2) Evacuate large equipment to a location at a sufficient distance from the overhead high voltage lines to prevent contact due to large swings of the wires.</p> <p>(3) Take the following measures for scaffoldings and work platforms.</p> <p>(a) Removal or furl of mesh sheets that increases wind load</p> <p>(b) Prevention of scaffolding from sliding and reinforcement of wall connectors.</p> <p>(c) Reinforcement of scaffoldings projecting from building by supporting rope or bracing</p> <p>(d) Fixation of materials on the scaffoldings or moving to the ground</p> <p>(4) Discontinue work at a high place. In addition, take measures to prevent scattering of materials etc. when scattering is anticipated.</p>	
<p>2.7.7 雪に対する措置</p> <p>請負者は、積雪のある作業現場及び周辺では、積雪に対し次の措置を講じなければならない。</p> <p>(1) 道路、水路等には幅員を示すためのポール、赤旗の設置等の転落防止措置を講じること。</p> <p>(2) 現場内の道路、工事用棧橋、階段、スロープ、通路、作業足場等の除雪等の作業員の転倒防止措置を講じること。</p> <p>(3) 付着した雪の除去など標識、掲示板等を見やすくすること。</p> <p>(4) 足場や構台上に積雪あるいは着氷がある場合は、雪や氷の除去作業以外の作業を禁止すること。</p>	<p>2.7.7 Measures for Heavy Snow</p> <p>For heavy snow prescribed in 2.7.4 (1) at the Site and its surrounding area, the Contractor shall:</p> <p>(1) Take fall prevention measures such as setting of poles, red flags to show the width of roads and waterways.</p> <p>(2) Take fall prevention measures for workers such as snow removal on roads, construction platforms, stairs, slopes, passages, scaffoldings etc.</p> <p>(3) Remove adhering snow on signs, notice boards, etc. to make them easy to see.</p> <p>(4) Prohibit works on the scaffoldings or platforms if snow or ice exists except its removal work.</p>	
<p>2.7.8 雷に対する措置</p>	<p>2.7.8 Measures for Lightning</p>	

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<p>請負者は、雷発生時の作業に関して、次の措置を講じなければならない。</p> <p>(1) 雷検知器、ラジオ受信機等により雷雲の発生や接近の情報を入手した時は、必要に応じて2.7.3(2)で規定の設備を用いて作業員に速やかに周知すること。</p> <p>(1) 雷光もしくは雷鳴が観測されたときは、直ちに作業を中止し、作業員を雷に対し安全な場所に避難させること。</p> <p>(2) 雷光と雷鳴の間隔が長くなるまで作業を再開しないこと。</p> <p>(3) 雷発生時の警報(作業中止、退避等)、連絡方法を定め、作業中止又は退避の場所等に関する措置を適切な所に看板等で示しておくこと。</p>	<p>Regarding works when lightning occurs, the Contractor shall:</p> <p>(1) When information regarding occurrence and approach of thunderclouds is obtained by lightning detector or radio etc., transmit it to the site workers immediately by stipulated facilities in accordance with 2.7.2 (2).</p> <p>(2) Stop all outdoor works immediately when lightning is observed, and make all workers evacuate to safe places.</p> <p>(3) Not resume work until the interval between lightning and crack of thunder increases.</p> <p>(4) Establish warnings (stopping work, evacuation, etc.) and communication methods in the event of a lightning occurs, and indicate measures related to work stoppage or evacuation locations on appropriate places with signs.</p>	
<p>2.7.9 地震及び津波に対する措置</p> <p>請負者は、地震発生後、津波に対して関係当局が警報を出した場合、又は津波発生が予見される場合は、決められた避難場所へ作業員を避難させなければならない。</p>	<p>2.7.9 Measures for Earthquake and Tsunami</p> <p>The Contractor shall evacuate workers to the predetermined safe place when the related authorities issue warning for occurrence of tsunamis or prediction of tsunami after the earthquake is expected.</p>	

JICA standard Safety Specification Preparation Study
2.8 Fire Prevention (English R0)

2019.9.9 JICA PFD-J
2019.9.9 NK R0

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<p>2 安全措置一般 2.8 火災予防 2.8.1 一般</p> <p>請負者は工事現場における火災予防については、当該国の法律に従い、法律に加え本仕様書を含む契約で別途の要求がある場合には、これに従わなければならない。</p>	<p>2. General Safety Measures 2.8 Fire Prevention 2.8.1 General</p> <p>The Contractor shall comply with the Laws of the Country regarding the fire prevention at the Site. In addition to the Law, in the case of separate requirement in the Contract including this Specification, the Contractor shall comply with it.</p>	
<p>2.8.2 消防体制の確立</p> <p>請負者は、請負者の事務所、仮設建物、仮設備、寄宿舎、仮設工事の構造物及び工事中の本設工事の構造物等(以下、本節においては「事務所等」という。)に関し、次の消防体制を確立しなければならない。</p> <p>(1) 事務所等の消防計画を、本仕様書 1.10[緊急事態対応計画及び緊急通報体制]の緊急事態対応計画の一部として作成し、エンジニアに提出すること。同消防計画は本仕様書 2.8.3 から 2.8.6 に規定の事項を含んだものとする。</p> <p>(2) 消防および火災発生時の避難に係る責任者を指名すること</p> <p>(3) 消防訓練計画を作成し、消防計画に含めること。訓練を実施した場合はその記録を保管すること。</p>	<p>2.8.2 Establishment of Firefighting System</p> <p>The Contractor shall establish the following firefighting system for the Contractor's offices, temporary buildings, temporary facilities, dormitory, temporary construction structure, and permanent structures under construction (hereinafter referred to as “offices” in this section).</p> <p>(1) Prepare a fire fighting plan for the offices as a part of the emergency response plan in 1.10 [Emergency Response Plan and Emergency Call System] of this Specification and submit it to the Engineer. The firefighting plan shall include the items stipulated in 2.8.3 to 2.8.6 of this Specification.</p> <p>(2) Designate a person responsible for firefighting and also evacuation in the event of a fire.</p> <p>(3) Prepare a fire fighting training plan and include it in the fire fighting plan. The record of the training shall be kept accordingly.</p>	
<p>2.8.3 防火及び消火のための措置</p> <p>請負者は、事務所等の防火及び消火のために、以下の措置を講じなければならない。</p> <p>(1) 現場内では、指定場所以外での喫煙を禁止し、喫煙場所には水を入れたバケツを設置するなど防火を徹底すること。</p> <p>(2) 消火栓、消火器等の設備は、初期消火に充分なものとする。</p> <p>(3) 火気を取扱う場所には、普通火災用、油火災用、電気火災用等の用途に応じた消火器等消火設備を備えること。消火器は定期的に点検し、有効期間を過ぎたものは交換すること。</p> <p>(4) 火災発生時には消防隊が円滑に活動を行うための誘導・支援を行うこと。</p>	<p>2.8.3 Measures of Fire Prevention and Fire Fighting</p> <p>For fire prevention and firefighting of offices, The Contractor shall:</p> <p>(1) Prohibit smoking anywhere in the Site other than designated areas, and implement fire prevention measures thoroughly by placing buckets with water in smoking areas etc.</p> <p>(2) Locate fire hydrants and fire extinguishers sufficient for initial firefighting.</p> <p>(3) Locate fire extinguishing equipment including fire extinguishers in places where fire is handled corresponding on the purpose of use, such as for ordinary fires, oil fires, electric fires etc. Fire extinguishers shall be regularly inspected and replaced after the expiration date.</p> <p>(4) In the event of a fire, provide guidance and support for the fire brigade to perform smoothly.</p>	
<p>2.8.4 避難のための措置</p> <p>請負者は、火災時の避難を容易にするために、次の措置を講じなければならない。</p> <p>(1) 必要に応じ避難経路図を作成し、見やすい場所に掲示すること。</p>	<p>2.8.4 Measures for Evacuation</p> <p>For facilitating evacuation in the event of a fire, The Contractor shall:</p> <p>(1) Create an evacuation route map if necessary and post it in easy-to-see places.</p> <p>(2) Display the evacuation route as necessary at the work places.</p>	

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<p>(2) 現場においては必要に応じ避難経路を標示すること。</p> <p>(3) 2階以上の建物で収容人員が30人以上の場合、または立坑及び地下工事の場合には複数の避難経路を設置すること。</p> <p>(4) 火災発生時に避難が必要な現場内の要員に、火災発生の事実を周知できる連絡方法を定めておくこと。</p>	<p>(3) Install multiple evacuation routes for a building with 2 or more floors and a capacity of 30 people or more, or in the case of shafts and underground work.</p> <p>(4) Establish a communication method to inform the personnel at the Site who need to evacuate in the event of a fire</p>	
<p>2.8.5 可燃物の管理</p> <p>請負者は、火災発生の危険性が高いガソリン、アセトン、トルエン等の有機溶剤、灯油、軽油、重油、クレオソート油、ギヤー油、シリンダー油等の潤滑油等の可燃物(以下、本款においては「可燃物」という。)の貯蔵及び管理については、当該国の法律に従わなければならない。また、次の措置を講じなくてはならない。</p> <p>(5) 危険物を貯蔵又は取扱う場合には、責任者を指名し、エンジニアに通知すること。</p> <p>(6) 上記責任者は、可燃物の取り扱いについて十分な経験と能力を確認できる者とする。また、当該国の法律で関連の資格が要求される場合は、当該資格を有する者でなければならない。</p> <p>(7) 可燃物は直射日光を避け、通風換気の良いところに貯蔵し、貯蔵場所には、立入禁止の措置を講じ、かつ火気使用禁止の標示をすること。</p> <p>(8) 可燃物の取扱方法を定め、エンジニアに通知するとともに請負者の要員への周知徹底を図ること。</p>	<p>2.8.5 Management of Combustible Materials</p> <p>The Contractor shall comply with the Laws of the Country for usage and storage of combustible materials such as gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene etc. (hereinafter referred to as “combustible materials” in this subsection).</p> <p>In addition, the Contractor shall:</p> <p>(1) Appoint the person responsible for storing or handling combustible materials and notify the name to the Engineer.</p> <p>(2) Appoint a person who can be confirmed as having sufficient experience and ability in handling combustible materials. In addition, if the Law of the Country requires, the person shall have the relevant qualification.</p> <p>(3) Store combustible materials in a well-ventilated place away from direct sunlight, take measures to prohibit entering and display for prohibition of using fire.</p> <p>(4) Determine handling methods of combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor’s Personnel.</p>	
<p>2.8.6 溶接・溶断による火災の予防</p> <p>溶接、溶断作業による火災の予防に関しては、本仕様書 7.9[電気溶接・ガス切断作業]の規定に従うこと</p>	<p>2.8.6 Fire Prevention Measures in Welding and Gas Cutting</p> <p>The Contractor shall comply with the JSSS 7.9 [Welding and Gas Cutting Works] for the fire prevention measures in welding and gas cutting works.</p>	

JICA standard Safety Specification Preparation Study (安全標準スペック作成にかかる本格調査)
 Study paper on 2 General Safety Measures 2.10 Site Management 2.10.5 Wearing and Use of Personal Protective Equipment (English 1st Draft)
 検討経緯書 第2章安全措置一般第10節現場管理 5.保護具等の着用と使用 (英文第1案)

2019.5.14 Draft Final in Japanese
 2019.6.10 Study Team (English)

Spec. in Japanese (Final Draft in Japanese) スペック和文(最終案)	Specification in English (1 st Draft)	Specification in English (2 st Draft) reviewed/edited by Mr. Durrant
<p>2 安全措置一般 2.10 現場管理 2.10.5 保護具の着用と使用</p> <p>(1) 一般事項</p> <p>(a) 請負者は、作業に携わるものに、作業に適した服装を身につけさせるとともに、保護具を携帯させ、必要時には必ず使用させなければならない。</p> <p>(b) 請負者は、本仕様書 1.2.2[引用基準]に従い、下記に規定の保護具を作業員に使用させなければならない。</p> <p>(c) 請負者は、下記に規定のない保護具については、本仕様書内の他の保護具に関する規定に従わなければならない。</p>	<p>2 General Safety Measures 2.1 Site Management 2.10.5 Wearing and Use of Personal Protective Equipment</p> <p>(1) General Items</p> <p>(a) The Contractor shall ensure that workers engaged in the work shall wear appropriate clothing, carry the Personal protective equipment and use or wear them whenever necessary.</p> <p>(b) The Contractor shall ensure that the following Personal Protective Equipment is used by worker in accordance with 1.2. 2 [Reference Standard] of this Specification.</p> <p>(c) For any matters not provided for in the Clause below , the Contractor shall comply with the provisions for protective equipment stipulated in this specification for protective equipment.</p>	<p>2 General Safety Measures 2.10 Site Management 2.10.5 Wearing and Use of Personal Protective Equipment</p>
<p>(2) 保護具の定義及び請負者の責務</p> <p>(a) 保護具は、作業場所での作業員の身体に対し、損傷または機能障害を引き起こす可能性のあるリスクから作業員を防護する個人が使用する用具をいう。</p> <p>(b) 全ての保護具の構造は、安全が確保された設計であり、かつ作業に適したものでなければならない。</p> <p>(c) 保護具は、次の(3)に規定の規格に準拠しなければならない。規格に準拠しない保護具の場合、請負者は同等の規格以上であることを証明する資料を、エンジニアへ提出し、同意を得なければならない。</p> <p>(d) 請負者は、作業員に保護具を無償で提供し、作業現場に携帯させ、必要時には必ず使用させなければならない。</p> <p>(e) 請負者は、作業員に保護具を作業開始前に点検させなければならない。</p> <p>(f) 請負者は、保護具の維持管理・衛生に責任を持ち、異常を認めた場合には補修又は取り替えなければならない。</p>	<p>(2) Definition of personal protective equipment and responsibility of the Contractor</p> <p>(a) Personal protective equipment (hereunder referred to “PPE”) is used by individuals to protect the Contractor’s Personnel from risks that may cause damage or functional disorders to their bodies at the Site.</p> <p>(b) All personal protective equipment shall be designed for safety and shall be suitable for the Works to be performed.</p> <p>(c) Personal protective equipment shall conform to the standards stipulated in (3) below. In the case of non-conforming Personal protective equipment stipulated in (3) below, the Contractor shall submit to the Engineer the document certifying that the same or higher standards are met and obtain the Engineer’s consent.</p> <p>(d) The Contractor shall provide protective equipment to the Contractor’s Personnel, have them take it to the site, and have them use it whenever necessary.</p> <p>(e) The Contractor shall instruct to the worker and shall inspect the protective equipment before commencing the work.</p> <p>(f) The Contractor shall take responsibility for the personal protective equipment to be used and for the proper maintenance and sanitation and promptly repair or replace any protective equipment that is found to be defective.</p>	

<p>(3) 保護具の目的と規格 保護具の目的と適用する規格は以下である。</p> <p>(a) 保護帽 保護帽は、物体の飛来落下と衝突、墜落・転倒時における頭部への衝撃の低減又は感電から作業員の頭部の保護を目的とする。 保護帽は、次の規格の要求事項に見合う物を使用しなければならない。</p> <p style="text-align: center;">保護帽の適用規格</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>規格番号</th> <th>規格名</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>JIS T8131 産業用ヘルメット/ Industrial safety helmets</td> </tr> <tr> <td>2</td> <td>ANSI Z89.1 Industrial Head Protection</td> </tr> <tr> <td>3</td> <td>BS EN 397 Industrial safety helmets</td> </tr> </tbody> </table>	規格番号	規格名	1	JIS T8131 産業用ヘルメット/ Industrial safety helmets	2	ANSI Z89.1 Industrial Head Protection	3	BS EN 397 Industrial safety helmets	<p>(3) Purpose and Standards for Personal protective equipment The Purpose and applicable Standards of Personal protective equipment are as follows:</p> <p>(a) Head protection Head protection shall protect workers' heads from falling or flying objects, reduce the impact exerted on workers' heads if they trip or fall, and shall protect workers' heads from electric shocks. Head protection shall comply with a level of performance that is equal to or greater than the following standards.</p> <p style="text-align: center;">Applicable Standards of Head protection</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Standards number</th> <th>Standards name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>JIS T8131 Industrial safety helmets</td> </tr> <tr> <td>2</td> <td>ANSI Z89.1 Industrial Head Protection</td> </tr> <tr> <td>3</td> <td>BS EN 397 Industrial safety helmets</td> </tr> </tbody> </table>	Standards number	Standards name	1	JIS T8131 Industrial safety helmets	2	ANSI Z89.1 Industrial Head Protection	3	BS EN 397 Industrial safety helmets	
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<p>(b) 安全靴 安全靴は、物体の落下や挟まれによる作業員の足の怪我の低減、鋭利物の踏み抜きの防止、感電防止又は靴の滑りによる転倒を防止することを目的とする。 安全靴は、下の規格の要求事項に見合う物を使用しなければならない。</p> <p style="text-align: center;">安全靴の適用規格</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>規格番号</th> <th>規格名</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>JIS T8101 安全靴/Protective footwear</td> </tr> <tr> <td>2</td> <td>ASTM F2413 Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear</td> </tr> <tr> <td>3</td> <td>BS EN ISO 20349 Personal protective equipment. Footwear protecting against risks in foundries and welding. Requirements and test methods for protection against risks in welding and allied processes</td> </tr> </tbody> </table>	規格番号	規格名	1	JIS T8101 安全靴/Protective footwear	2	ASTM F2413 Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear	3	BS EN ISO 20349 Personal protective equipment. Footwear protecting against risks in foundries and welding. Requirements and test methods for protection against risks in welding and allied processes	<p>(b) Protective footwear Protective footwear shall reduce the number of foot injuries suffered by workers due to falling objects or punching, protect workers from treading on sharp objects, protect workers from electric shocks, and prevent worker's slipping over. Protective footwear shall comply with a level of performance that is equal to or greater than the following standards.</p> <p style="text-align: center;">Applicable Standards of Protective footwear</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Standards number</th> <th>Standards name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>JIS T8101 Protective footwear</td> </tr> <tr> <td>2</td> <td>ASTM F2413 Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear</td> </tr> <tr> <td>3</td> <td>BS EN ISO 20349 Personal protective equipment. Footwear protecting against risks in foundries and welding. Requirements and test methods for protection against risks in welding and allied processes</td> </tr> </tbody> </table>	Standards number	Standards name	1	JIS T8101 Protective footwear	2	ASTM F2413 Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear	3	BS EN ISO 20349 Personal protective equipment. Footwear protecting against risks in foundries and welding. Requirements and test methods for protection against risks in welding and allied processes	
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**JICA Standard Safety Specification Preparation Study
2 General Requirements (English R2 for Issue 3)**

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2019.11.19 NK Issue 2
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JSSS in Japanese (2019/9/3)	JSSS in English Issue 2 (2019/11/19)	JICA Comments (2019/12/17) JC: JICA Comments in blue letters on sentence underlined MM: Minutes of Meeting in2020/01 NK: NK actions	JSSS in English R2 for Issue 3 (2020/3/4) Sentences marked yellow color are added or modified ones from the last version.
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<p>2 安全措置一般 2.1 適切な作業環境の整備 請負者は、良好な作業環境を整備・維持するため、以下を行わなければならない。→E 2.1 に規定済み</p> <p>2.1.1 粉じんが発生する場所での必要な措置 請負者は、土石、岩石、鉱物、セメント等の粉じんが発散するおそれのある場所では、発生源を湿潤な状態に保つ、発生源を覆う等、粉じんの発散を防止するための措置とともに、噴霧器、散水設備、換気装置の設置等、当該作業にかかる粉じんの発散を長時間暴露限界値以下まで減少させるための適切な措置を講じなければならない。→E 2.1.1(5)に規定済み</p> <p>この長時間暴露限界値は、次の表に示す粉じんの数値を含め、英国の Health and Safety Executive (HSE) 発行の EH40/2005 Workplace exposure limits の Table 1: List of approved workplace exposure limits に規定の数値とする。→E 2.1.1(1) (2)に規定済み</p> <table border="1"> <tr> <td>粉じんの種類</td> <td>長時間暴露</td> </tr> </table>	粉じんの種類	長時間暴露	<p>2 GENERAL SAFETY MEASURES 2.1 WORK ENVIRONMENT Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances (1) Definitions Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than: (a) 10 mg/m3 (8-hour TWA) of inhalable</p>	<p>2 GENERAL SAFETY MEASURES 2.1 WORK ENVIRONMENT Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances (1) Definitions Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than: (a) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p>	<p>2 GENERAL SAFETY MEASURES 2.1 WORK ENVIRONMENT Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances (1) Definitions Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than: (a) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p>
粉じんの種類	長時間暴露				

	Long-term exposure limit (8-hr time-weighted average dust; or reference period)	(b) 4 mg/m3 (8-hour TWA) of respirable dust.
	吸入性 (Respirable)	吸引性 (Inhalable)
吸入性結晶シリカ(*)	0.1 mg/m3	-
ポルトランドセメント(*)	4 mg/m3	10 mg/m3

→規定内容変更。→理由:HSE の Table 1 から項目を増やして規定 (MD added items above so that they are coordinated with later 2.1.6 and also because they are often used on JICA funded projects.

MD suggest that gases are also better mentioned here otherwise there is no clear reference basis elsewhere. Asbestos is not included in the above HSE standard and table, therefore the following is added with reference to HSE in this case to keep it consistent with your chosen reference basis:→(NK 方針:JICA コメントあり。英語版から表を削除し、発注者が Special Spec でモニターする種類を規定するよう英文を変更する。)

有効な粉じんの低減の措置を図ることが難しく、短時間・暫定的な作業の場合に限り、保護具の活用を認める。この場合においては、次表の規格に適合する保護具又は規格に従い選定した保護具を使用させなければならない。→B 2.9.6 に規定済み

規格番号		
1	JIS T 8151 JIS T 8157	防じんマスク/Particulate 電動ファン付き呼吸用保
2	1) BS EN 149: 2001+A1: 2009 2) BS EN 14593-1: 2018	1) Respiratory protective against particles. 2) Respiratory protective devices with demand
3	ANSI Z88.2-2015	Practices for Respiratory

(2) Standards

The Contractor shall comply with EH40/2005 Workplace Exposure Limits, (third edition published 2018), issued by HSE. Table 1 shall apply and the Short Term and Long-Term Exposure limits shall not be exceeded.

Table 2.1.1: List of Approved Workplace Exposure Limits (WELs)

Types of Dust/Gas	Long-term Exposure Limit (8 hr TWA Reference Period)	Short-term Exposure Limit (15 minute TWA Reference Period)	Notes
Carbon Dioxide	9150 mg/m3 5000 ppm	27400 mg/m3 15000 ppm	
Carbon Monoxide	23 mg/m3 20 ppm	117 mg/m3 100 ppm	BMGV
	35 mg/m3 30 ppm	232 mg/m3 200 ppm	Mining Only
Chlorine	-	1.50 mg/m3 0.50 ppm	Water treatment
Chlorine dioxide	0.28 mg/m3 0.10 ppm	0.84 mg/m3 0.30 ppm	Water treatment
Hydrogen Sulphide	7 mg/m3 7 ppm	14 mg/m3 14 ppm	Waste Water treatment
Nitrogen Dioxide	0.96 mg/m3 0.50 ppm	1.91 mg/m3 1.00 ppm	Does not apply to underground mining and tunnelling industries until 21/8/23
Nitrogen Monoxide	30 mg/m3 25 ppm	30 mg/m3 1.00 ppm	Limit applicable to underground mining & tunnelling industries ONLY until 21/8/23
Portland Cement: Respirable Inhalable	4 mg/m3 10 mg/m3		
Silica: Respirable Crystalline	0.1 mg/m3	1.5 mg/m3	

(Note: The entire HSE table shall apply, items and values above are extracted samples only)

(b) 4 mg/m3 (8-hour TWA) of respirable dust.

~~Some dusts have been assigned specific WELs as referred to in Table 2.1.1 below.~~

(2) Standards

~~The Contractor shall comply with EH40/2005 Workplace Exposure Limits, (third edition published 2018), issued by HSE. Table 1 shall apply and the Short Term and Long-Term Exposure limits shall not be exceeded.~~

JC: 「HSE に準拠する。具体的に必要となる項目については Annex * * にあるとおり。」といった趣旨を記載して、本文中からは以下の Table 2.1.1 を削除する。Annex は空欄として発注者が実際に必要な項目を書き込めるようなフォーマットを入れておく

This paragraph will be revised to that like “The Contractor shall comply with HSE. The items to be applied are shown in Annex.” The Table 2.1.1 will be deleted from 2.1.1. In Annex, blank table will be attached for the Employer to fill actually required items.

MM: 2.1.1 (2) Standard Table 2.1.1

The Table with detail will be deleted.

The User Guide will require the table to be inserted with the particular monitoring items specified by the Executing Agency/Consultant in the Particular Safety Specification.

NK: The paragraph will be modified as follows (for MD’s review and editing.)

The Contractor shall comply with EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1. The Contractor shall monitor the dusts specified in the Particular Safety Specifications.

Table 2.1.1: List of Approved Workplace Exposure Limits (WELs)

Types of Dust/Gas	Long-term Exposure Limit (8 hr TWA Reference Period)	Short-term Exposure Limit (15 minute TWA Reference Period)	Notes
Carbon Dioxide	9150 mg/m3 5000 ppm	27400 mg/m3 15000 ppm	
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Chlorine dioxide	0.28 mg/m3 0.10 ppm	0.84 mg/m3 0.30 ppm	Water treatment
Hydrogen Sulphide	7 mg/m3 7 ppm	14 mg/m3 14 ppm	Waste Water treatment
Nitrogen Dioxide	0.96 mg/m3 0.50 ppm	1.91 mg/m3 1.00 ppm	Does not apply to underground mining

(b) 4 mg/m3 (8-hour TWA) of respirable dust.

(TWA means Time weighted average.)

~~Some dusts have been assigned specific WELs as referred to in Table 2.1.1 below.~~

(2) Standards of Workplace Exposure Limits (WELs)

The Contractor shall comply with EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1. The Contractor shall monitor the dusts specified in the Particular Safety Specifications.

			and-tunnelling-industries-until-21/8/23
Nitrogen-Monoxide	30 mg/m ³ 25 ppm	30 mg/m ³ 1.00 ppm	Limit-applicable-to-underground-mining-&-tunnelling-industries-ONLY-until-21/8/23
Portland-Cement-Respirable-Inhalable	4 mg/m ³ 10 mg/m ³		
Silica-Respirable-Crystalline	0.1 mg/m ³	1.5 mg/m ³	

(Note: The entire HSE table shall apply, items and values above are extracted samples only)

JC: 表の記述に関するコメントがあり。

NK: 表が削除されたので、コメント対応を行わない。

JC: 全ての危険部の分析は無理。情報提供と対象基準の明示は、発注者の役割では？

It impossible to analyse all dangerous items. Is it the role of the Employer to provide information and specify items and limits?

NK: Table 2.1.1 will be deleted. The User Guide will show the Table in which the monitoring items will be specified by the Employer in the Particular Safety Specification.

(3) Asbestos

JC: OSHA、HSE とも重視しているのでアスベストが入るのは至極当然。(HSE が重視) この上の結晶性シリカがこれ。

It is extremely natural to specify asbestos as both OSHA and HSE give special attention to them (HSE does.)

The above crystalline silica is this (incomplete sentence).

MM: 2.1.1(3)(b) Asbestos Will be reviewed for reference in the User Guide.

- (a) For the information of Project participants, asbestos causes many construction fatalities every year. Participants should be aware that it is commonly found in older buildings frequently in ceiling and floor cavities, insulation, sprayed coatings, floor tiles and composites, asbestos-cement sheets and roofing felt;

JC: This shall be deleted as it is explanation (annotation).

NK: This (3)(a) above will be shifted to User Guide.

NK: (a) and (b) will be modified as right

- (b) If after Site survey and investigation (if

(3) Asbestos

- (a) For the information of Project participants, asbestos causes many construction fatalities every year. Participants should be aware that it is commonly found in older buildings frequently in ceiling and floor cavities, insulation, sprayed coatings, floor tiles and composites, asbestos-cement sheets and roofing felt;

- (b) If after Site survey and investigation (if necessary) there is a possibility that asbestos may be encountered in the Works, this shall be stated in the Bidding Documents in accordance with the requirements of JSSS 1.19 [Hazardous Substances], and the required remedial measures shall be taken; and

- (c) The Contractor shall comply with L143 Approved Code of Practice and guidance, for Managing and Working

(3) Asbestos

- (a) When required in the Contract, the Contractor shall take measures for asbestos in accordance with the Particular Safety Specification.

- (b) When existence of asbestos is found in the Works, the Contractor shall report to the Engineer and take measures in accordance with the requirements of JSSS 1.19 [Hazardous Substances], and

- (c) If so required in the Contract or by an instruction by the Engineer, the Contractor shall comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.

<p>2.1.2 換気の悪い場所における必要な措置</p> <p>請負者は、自然換気が不十分な場所では、内燃機関を有する機械を使用してはならない。ただし、やむを得ず内燃機関を使用するときは、当該内燃機関の排気ガスによる健康障害を防止するため、十分な換気を行わな</p>	<p>with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.</p> <p>(4) Other Hazardous Substances The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either existing on the Site or used in the Works.</p> <p>(5) Prevention (a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and (b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowsers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE (a) If it is not possible to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and (b) For details of PPE refer to JSSS 2.9 [Personal Protective Equipment (PPE)].</p> <p>2.1.2 Poor Ventilation</p>	<p>necessary) there is a possibility that asbestos may be encountered in the Works, this shall be stated in the Bidding Documents in accordance with the requirements of JSSS 1.19 [Hazardous Substances], and the required remedial measures shall be taken; and</p> <p>(c) The Contractor shall comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.</p> <p>JC: Put "If so required in the contract or by an Instruction by the Engineer," at the beginning of (c). NK: Done as commented.</p> <p>(4) Other Hazardous Substances The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either existing on the Site or used in the Works.</p> <p>(5) Prevention (a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and (b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowsers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE (c) If it is not possible to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and</p> <p>JC: 「経済的に合理的な手段では不可能」といった定義が必要か reasonably impossible Definition is necessary such as "impossible in financial and reasonable method (reasonably impossible)". NK: (a) is modified as right. If it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and:</p> <p>(d) For details of PPE refer to JSSS 2.9 [Personal Protective Equipment (PPE)].</p> <p>2.1.2 Poor Ventilation</p> <p>JC: 酸素濃度の記載が抜けているので入れるようにしてください。日本語版の酸素濃度に関する記載の範囲で追記願います。 There is missing of concentration limit values of oxygen, so they shall be added as mentioned in Japanese draft JSSS.</p>	<p>(4) Other Hazardous Substances The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either existing on the Site or used in the Works.</p> <p>(5) Prevention (a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and (b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowsers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE (a) If it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and (b) For details of PPE refer to JSSS 2.9.1 [Personal Protective Equipment (PPE)].</p> <p>2.1.2 Poor Ventilation</p>
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<p>ければならない。→E2.1.2(4)に規定済み</p>	<ol style="list-style-type: none"> (1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation. (2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall adopt measures required by HSE and otherwise provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels. (3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9 [Personal Protective Equipment (PPE)]. (4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and prevent any emission of exhaust gases in internal areas and provide additional adequate ventilation. 	<p>MM: 2.1.2 Poor ventilation Concentration Limit value for oxygen and other gases will be inserted from the draft.</p> <p>NK: The values of HSE and Japanese JSSS are different. To make consistent of source of values for dust and oxygen, etc. (19%) will be specified in 2.1.6 (5).(1) is modified as below.</p> <ol style="list-style-type: none"> (1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation. (2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall adopt measures required by HSE and otherwise provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels. <p>JC: Delete “adopt measures required by HSE and otherwise.”</p> <p>NK: Deleted as JICA commented.</p> <ol style="list-style-type: none"> (3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9 [Personal Protective Equipment (PPE)]. (4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and prevent any emission of exhaust gases in internal areas and provide additional adequate ventilation. <p>JC: (4)は閉鎖空間で内燃機関を使う場合を想定しているので、この記述は矛盾しているのではないかと。書くのであれば、一旦廃棄したガスが再流入しないための措置ではないでしょうか。</p> <p>Does this sentence contradict because (4) is specified for assuming internal combustion engines in confined space? If specify, is measures for re-inflowed exhaust air once expelled.</p> <p>NK: Deleted “and prevent any emission of exhaust gases in internal areas”</p> <p>NK: There is an opinion to reinstate the following items provided in the Japanese version as they specify concrete safety measures necessary for the Contractor to take for works in a confined space.</p> <p>(5) The Contractor shall take the following measures to ensure the safety of workers when working in confined spaces.</p> <p>(a) Prohibit entry of any of the Contractor's Personnel and any other personnel who are not carrying and displaying an official permit issued to them by the HSO,</p> <p>(b) Set a spotter outside the workspace to constantly monitor the safety of personnel in the confined space. In</p>	<ol style="list-style-type: none"> (1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation. (2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels. (3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9 [Personal Protective Equipment (PPE)]. (4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and provide additional adequate ventilation.
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2.1.3 強烈な騒音を発生する場所等での必要な措置

請負者は、90dB 以上の騒音(強烈な騒音という)を発生する作業場所においては、請負者の要員の騒音障害防止のため次の措置を講じなければならない。→E2.1.3(2)に規定済み

- (1) OSHA Subpart D – Occupational Health and Environmental Controls § 1926.52 Occupational noise exposureの規定に従い、作業場所での騒音の程度と騒音の暴露時間に対応して請負者の要員に、本仕様書 2.10.5(3)(d)[防音保護具]に規定の保護具を使用させること。→E2.1.3(1)(2)に規定済み
- (2) 当該作業場所では耳栓その他の騒音障害防止用の保護具を使用しなければならない旨を、請負者の要員が容易に認知できる見やすい場所に掲示すること。→E2.1.3(2)(c)に規定済み

2.1.4 閉鎖空間における安全措置

各種ビット、タンク、水槽、マンホール、ダクト、PC 箱桁、下水道等の狭い作業空間あるいは小さい出入口のみを有する閉鎖空間(以下本節では「閉鎖空間」という。)における作業において、請負者は請負者の要員の酸素欠乏や有毒ガス等に対する安全確保のために、下記の措置を講じなければならない。→E2.1.4 に規定済み

- (1) 酸素濃度、硫化水素濃度、その他必要な作業環境項目について測定を行うこと。作業環境測定は作業前に毎日実施すること。→E2.1.4(1)に規定済み

2.1.3 Noise

- (1) Standards

By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart D—Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

- (2) Preventive Measures

To prevent noise damage to Contractor’s Personnel, which may occur when noise levels exceed 90 dB (referred to as “intense noise” in JSSS), the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls

addition, a liaison shall be appointed among the personnel working in the workspace and a method for communicating with external spotter shall be established,
(c) Establish an emergency rescue system and create a rescue operation procedure. Prepare respiratory protective equipment such as a respirator for rescue operations,
(d) If an emergency occurs and rescue is required, prohibit any personnel to engage in rescue activities other than those instructed to do so in order to prevent secondary accident,
(e) Conduct education and training on the safety measures to all Contractor’s Personnel that are required to work in confined spaces

Although, in JSSS 2.1.4 Confined Spaces (3) Work Environment and (4) Hazardous Substances, JSSS 1.19 Dangerous Works and 2.3 Prohibition of entry – Dangerous Work are referred, however they are quite abstract as for the confined space works to avoid accident.

NK: considers if there is special clause for confined spaces, they should be specified. This Chapter 2 is general requirement, therefore not reinstated here.

2.1.3 Noise

- (1) Standards

By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart D—Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

- (2) Preventive Measures

To prevent noise damage to Contractor’s Personnel, which may occur when noise levels exceed 90 dB (referred to as “intense noise” in JSSS), the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls to within the levels of Table D-2 of the OSHA Standard referred to above, if at all possible;

JC: Table D-2—Permissible Noise Exposures 読み手の立場を考慮上記のとおりタイトルまで記載するようにお願いします。 Table D-2—Permissible Noise Exposures Please kindly specify title of Table as above considering easy understanding of readers.

MM: 2.1.3 Noise Table D-2 of the OSHA Standard will be included.

NK: The title and the Table are added.

2.1.3 Noise

- (1) Standards

By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart D – Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

- (2) Preventive Measures

To prevent noise damage to Contractor’s Personnel, which may occur when noise levels exceed 90 dB (referred to as “intense noise” in JSSS), the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls to within the levels of Table D-2, Permissible Noise Exposures of the OSHA Standard referred to above, if at all possible;

Table D-2: Permissible Noise Exposures

Duration per day, hours	Sound level dBA slow response	Duration per day, hours	Sound level dBA slow response
8	90	1½	102
6	92	1	105
4	95	½	110
3	97	¼ or less	115

<p>み</p> <p>(2) 上記(1)の作業環境測定の結果、2.1.6 (2)に規定の制限値に抵触する場合は、換気による作業環境を改善し、これを維持すること。→E2.1.4(3)に規定済み</p> <p>(3) 作業空間内には、入場許可を与えた要員以外は立ち入らせないこと。→規定なし。(下記参照)</p> <p>(4) 作業空間外に監視員を配置し、作業空間内の要員の安全を常時監視させること。また、作業空間内で作業する要員の中から連絡係を任命し、外部の監視員との交信方法を整備すること。→規定なし。(下記参照)</p> <p>(5) 緊急時の救出体制を確立し、救出活動の手順を作成すること。救出活動に用いられる空気呼吸器等の呼吸用保護具を常備しておくこと。異常が発生し救出が必要な場合は、救出の際の二次災害を防ぐため、指示された者以外は救出活動に従事させないこと。→規定なし。(下記参照)</p> <p>(6) 当該閉鎖空間において作業を行う場合に必要な安全措置について、当該作業員に教育訓練を行うこと。→規定なし。(下記参照)</p> <p>(7) 当該作業にかかる作業計画書・安全衛生詳細計画書に、上記(1)から(6)の内容を含めること。 →規定なし。→(3)~(7)の規定がない理由: 英語版 2.1.4(4)(5)で JSSS 1.19 [Dangerous Work]及び JSSS 2.3 [Prohibition of Entry - Dangerous Work]を参照させているためであるが、1.19 の内容は閉鎖空間等に対するの具体性ではないため、(3)~(7)の規定を復活させる案もある。→(NKの方針:英文変更時に検討する。)</p>	<p>to within the levels of Table D-2 of the OSHA Standard referred to above, if at all possible;</p> <p>(b) If such controls are not possible of if they fail to reduce sound levels within the levels of Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS 2.9.52.9.5 [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard;</p> <p>(c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and</p> <p>(d) In all cases where the sound levels exceed the values shown in Table D-2, a Continuing Effective Hearing Conservation Program shall be implemented and maintained by the Contractor.</p>	<p>(b) If such controls are not possible of if they fail to reduce sound levels within the levels of Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS 2.9.5 [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard;</p> <p>JC: 英語的に正しいの? or OSHA 原文 If such controls fail to reduce sound levels within the levels of the table,の違い? Is this correct in English? Is this as the following original in OSHA? "If such controls fail to reduce sound levels within the levels of the table,"</p> <p>NK: Revised as right.</p> <p>(c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and</p> <p>(d) In all cases where the sound levels exceed the values shown in Table D-2, a Continuing Effective Hearing Conservation Program shall be implemented and maintained by the Contractor.</p> <p>JC: ぱっと見では case の意味が分からないかも 表の中で継続時間毎にその最大値が決まっている前提で書いているそれが duration (case)</p> <p>Is this as the following original in OSHA?</p> <p>"If such controls fail to reduce sound levels within the levels of the table,"</p> <p>In all cases where the sound levels exceed the values shown herein, a continuing, effective hearing conservation program shall be administered.</p> <p>↑原文 ケースをうまく表現できないなら、表を載せた方がわかりやすい。It is easy to understand to put the table in JSSS when cases are not expressed well/</p> <p>NK: The Table is included in JSSS.</p> <p>JC: 大文字定義 OSHA? a continuing, effective hearing conservation program shall be administered</p> <p>2.1.7 で具体的記載あるが、この下に続ける方が良いのでは? 少なくとも 2.1.7 とは書くでしょう。</p> <p>NK: 2.1.7 を(3)に移し規定します。Moved 2.1.7 to (3) in right.</p> <p>JC: いらない? Is it necessary?</p> <p>NK: Deleted.</p>	<table border="1"> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">100</td> <td></td> <td></td> </tr> </table> <p>(b) If such controls are not possible of if they fail to reduce sound levels within the levels of Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS 2.9.5 [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard;</p> <p>(c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and</p> <p>(d) In all cases where the sound levels exceed the values shown in Table D-2, a continuing effective hearing conservation program specified in (3) below shall be implemented.</p> <p>(3) Hearing Conservation Program</p> <p>(a) The Contractor shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in order to accurately identify any Contractor's Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8-hour time-weighted average.</p> <p>(b) The Contractor must monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. The Contractor shall choose the monitoring method that best suits each individual situation.</p>	2	100		
2	100						

<p>2.1.6 作業環境の把握</p> <p>(1) 請負者は、適切な作業環境を確保するため、下記の項目について、必要に応じ随時モニタリングを実施しなければならない。→E2.1.6(1)に規定済み</p> <p>(a) 土石、岩石、鉱物、セメント等の粉じんが、著しく発生する作業場での粉じん→E2.1.6(3)(b)に規定済み</p> <p>(a) 強烈な騒音を発生する作業場所における騒音→E2.1.6(3)(c)に規定済み</p> <p>(b) 坑内及び地下室、地下掘削等の地下空間における作業場の通気量、気温、炭酸ガス、酸素濃度又は硫化水素濃度→E2.1.6(3)(d)に規定済み</p> <p>(c) 閉鎖空間での、酸素濃度又は硫化水素濃度→E2.1.6(3)(d)に規定済み</p> <p>(d) 高温多湿な作業場所における温度及び湿度→E2.1.6(3)(d)に規定済み</p> <p>(e) 作業場所及び通路における照度→E2.1.6(3)(e)に規定済み</p> <p>なお、当該国の法律に定められた環境調査及び本契約で別途に定めがある環境影響モニタリングとは別に、上記のモニタリングを実施しなければならない。→E2.1.6(4)に規定済み</p> <p>(2) 以下(a)~(d)が該当する場合は、本仕様書 2.1.4[閉鎖空間における安全措置]及び 2.3[立入禁止の措置]における求められる措置を取らなければならない。→E2.1.6(5)に規定済み</p> <p>(b) 酸素濃度:19.5%未満または23.5%を超える場合→規定なし→(2.1.6(5)に追記)</p> <p>(f) 硫化水素濃度:10ppmを超える場合→規定なし(2.1.6(5)に追記) 可燃性のガス、蒸気の濃度:可燃下限値の10%を超える場合→E2.1.6(5)(b)に規定済み</p> <p>(g) 炭酸ガス(二酸化炭素)濃度:0.5%を超える場合→規定なし→理由: 2.1.1の表 2.1.1の扱いに従うため。→(2.1.6(5)に追記))</p>	<p>2.1.4 Further Requirements for Dangerous Work</p> <p>Further to the requirements of JSSS 1.19 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, <u>including the recommendations of OSHA</u> and for this purpose the Contractor shall:</p> <p>(1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, <u>trade effluent</u> and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work.</p> <p>(2) Safely isolate the supply and flow of any chemical or other potentially harmful and materials, gases and chemicals during the period of any work and safely reconnect or continue same after the work is finished.</p>	<p>2.1.4 Further Requirements for Dangerous Work</p> <p>Further to the requirements of JSSS 1.19 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, <u>including the recommendations of OSHA</u> and for this purpose the Contractor shall:</p> <p>JC: OSHA や HSE に General な形で飛ばさないようにできればと思います (requirement が高くなってしまふので)</p> <p>Please not directly specify to follow OSHA/HSE in general because requirements level will become higher than JICA expected.</p> <p>NK: Understood. Specific clauses will be specified.</p> <p>(1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, <u>trade effluent</u> and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work.</p> <p>JC: これは工場廃水? ってここに関係する? Is it effluent from factories? Is it related with the construction?</p> <p>MM: 2.1.4 (1) "trade effluent" "trade effluent" is encountered on drainage upgrading projects so is better left in.</p> <p>NK: Left as it is.</p> <p>(2) Safely isolate the supply and flow of any chemical or other potentially harmful materials and gases in the Site during the period of any work and safely reconnect or continue the same after the work is finished.</p> <p>JC: 間違っていないけど、文章に意味がない印象(翻訳文のままだから?) →状況が分かりません。non-native に分かるように書いてください。</p> <p>It is not incorrect but its impression is little meaning (due to direct translation?). → Cannot understand situation. Please write for non-native to be able to understand.</p> <p>NK: This is specified by MD (not NK) considering the renovation works for such as water treatment/swedge facilities which has chemical, harmful materials, gases. The meaning of the sentence is, temporarily changing the flow and restoring it after completion of the work. NK ask MD to rewrite considering JICA comment</p>	<p>2.1.4 Further Requirements for Dangerous Work</p> <p>Further to the requirements of JSSS 1.19 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, and for this purpose the Contractor shall:</p> <p>(1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, <u>trade effluent</u> and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work.</p> <p>(2) Safely isolate the supply and flow of any chemical or other potentially harmful materials and gases in the Site during the period of any work and safely reconnect or continue the same after the work is finished.</p>
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<p>2.1.5 高温多湿な作業環境下での必要な措置</p> <p>請負者は、高温多湿な作業環境での作業員の健康障害の防止のため、下記の措置を講じなければならない。→E2.1.5に規定済み</p> <p>(1) 作業環境の改善</p> <p>(h) 屋外の高温多湿な作業場所においては、直射日光並びに周囲の壁面及び地面からの照り返しを遮ることができる簡易な施設を適所に設けること。→E2.1.5(1)(a)に規定済み</p> <p>(i) 屋内の作業場所では、熱源からの熱に対して遮蔽物を設けること、及び適度な通風を確保すること、又は冷房設備を設けること。→E2.1.5(1)(b)に規定済み</p> <p>(j) 作業場所には飲料水及び塩分補給を可能にするものを備え付けること。→E2.1.5(1)(d)に規定済み</p> <p>(k) 体調不良を起こした者を回復させることを目的として、作業場所の近隣に冷房設備を備えた休憩所又は日陰等の涼しい休憩所を設けること。かかる施設には体調不良者が横臥できるように設備を設けること。→E2.1.5(1)(e)に規定済み</p> <p>(2) 作業上の措置</p> <p>(a) 作業の休止および休憩時間を確保し、連続する作業時間を短縮すること。→E2.1.5(1)(f)に規定済み</p> <p>(l) 必要に応じて計画的に暑さへの順化期間を設けること。→E2.1.5(1)(g)に規定済み</p> <p>(m) 作業前後及び作業中の水分、塩分の摂取及び透湿性や通気性の良い服装の着用等を指導し、適宜巡視して、不適切な状況が認められたときは直ちに是正する等の適切な措置を講ずること。→E2.1.5(2)(3)に規定済み</p>	<p>(3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [General Safety Measures].</p> <p>(4) For further information on the removal and disposal of Hazardous Substances refer to JSSS 1.19 [Dangerous Work].</p> <p>(5) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [Prohibition of Entry - Dangerous Work].</p> <p>2.1.5 High and Low Temperatures and Humidity</p> <p>(1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by:</p> <p>(a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground;</p> <p>(b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working;</p> <p>(c) Where permitted by the Engineer, carrying out work during the night when temperatures and humidity are lower;</p> <p>(d) Providing drinking water and supplement that allow salt replenishment at work place;</p> <p>(e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover;</p>	<p>(3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [General Safety Measures].</p> <p>(4) For further information on the removal and disposal of Hazardous Substances refer to JSSS 1.19 [Dangerous Work].</p> <p>JC: 書いてる? →参照先に関連の記載が殆どないので削除。冒頭文と循環しているのも問題。 Described? → Deleted because there is no much related descriptions in the referred clause. It is problem that the opening sentence of 2.1.4 and the (4) are circulated.</p> <p>NK: Deleted as commented.</p> <p>(5) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [Prohibition of Entry - Dangerous Work].</p> <p>2.1.5 High and Low Temperatures and Humidity</p> <p>(1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by:</p> <p>(a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground;</p> <p>(b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working;</p> <p>(c) Where permitted by the Engineer under the hot climate carrying out work during the night when temperatures and humidity are lower;</p> <p>JC: hot な場合の条件の記載がなかったため追記しました。 Added conditions of hot as it was not mentioned</p> <p>NK: Added as commented.</p> <p>(d) Providing drinking water and supplement that allow salt replenishment at work place;</p> <p>(e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover;</p>	<p>(3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [General Safety Measures].</p> <p>(4) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [Prohibition of Entry - Dangerous Work].</p> <p>2.1.5 High and Low Temperatures and Humidity</p> <p>(1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by:</p> <p>(a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground;</p> <p>(b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working;</p> <p>(c) Where permitted by the Engineer under the hot climate carrying out work during the night when temperatures and humidity are lower;</p> <p>(d) Providing drinking water and supplement that allow salt replenishment at work place;</p> <p>(e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover;</p> <p>(f) Allowing work breaks and reducing excessive and continuous working times; and</p>
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<p>(n) 作業中に健康状態の異常が認められた要員については、休ませる等の必要な措置をとること。→E2.1.5(5)に規定済み</p>	<p>(f) Allowing work breaks and reducing excessive and continuous working times; and</p> <p>(g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold.</p> <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p> <p>2.1.6 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.29 [Safety Reports].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <p>(a) The pre-existent conditions for all periods of Dangerous Work;</p> <p>(b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated;</p> <p>(c) Noise levels at work places that generate intense noise;</p> <p>(d) Ventilation volume, temperature and concentration of carbon dioxide,</p>	<p>(f) Allowing work breaks and reducing excessive and continuous working times; and</p> <p>(g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold.</p> <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p> <p>2.1.6 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.29 [Safety Reports].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <p>(a) The pre-existent conditions for all periods of Dangerous Work;</p> <p>(b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated;</p> <p>(c) Noise levels at work places that generate intense noise;</p>	<p>(g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold.</p> <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p> <p>2.1.6 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.29 [Safety Reports].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <p>(a) The pre-existent conditions for all periods of Dangerous Work;</p> <p>(b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated;</p> <p>(c) Noise levels at work places that generate intense noise;</p> <p>(d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide,</p>
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	<p>carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.1. [Dangerous Work], JSSS 2.1.4 [Further Requirements for Dangerous Work] and JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>(a) Carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, hydrogen sulphide, oxygen, and similarly dangerous gases, chemicals and materials, in excess of the values indicated in JSSS Table 2.1.1: [List of Approved Workplace Exposure Limits (WELs)].</p> <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p> <p>2.1.7 Hearing Conservation Program</p> <p>(1) Contractor's shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in a way that accurately identify any Contractor's Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8-hour time-weighted average.</p> <p>(2) The Contractor must monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB</p>	<p>(d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.1. [Dangerous Work], JSSS 2.1.4 [Further Requirements for Dangerous Work] and JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>(a) Carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, hydrogen sulphide, oxygen, and similarly dangerous gases, chemicals and materials, in excess of the values indicated in JSSS Table 2.1.1: [List of Approved Workplace Exposure Limits (WELs)].</p> <p>JC: JICA: Please modify this sentence because the Table 2.1.1 is commented to delete.</p> <p>NK: (5)(a) is modified as right. (1) Oxygen of 19.5% in OSHA is revised to 19.0% as specified in EH40/2005 Workplace Exposure Limits by HSE to make consistent.</p> <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p> <p>2.1.7 Hearing Conservation Program –</p> <p>(1) The Contractor shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in order to accurately identify any Contractor's Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8 hour time weighted average.</p> <p>(2) The Contractor must monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure measurement must</p>	<p>other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.1. [Dangerous Work], JSSS 2.1.4 [Further Requirements for Dangerous Work] and JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>(a) Values of limits of measurement items:</p> <p>(i) Oxygen concentration less than 19.0% and more than 23.5%.</p> <p>(ii) Hydrogen sulphide concentration more than 10 ppm (short-term exposure limit) or 5 ppm (long term exposure limit);</p> <p>(iii) Carbon dioxide concentration more than 15,000 ppm (short-term exposure limit) or 5,000 ppm (long term exposure limit);</p> <p>(iv) Values of limits given in EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1, for the monitoring items specified in the Particular Safety Specification.</p> <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p>
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	<p>range and must be taken during a typical work situation. This requirement is performance oriented because it allows Contractors to choose the monitoring method that best suits each individual situation.</p>	<p>include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. The Contractor shall choose the monitoring method that best suits each individual situation.</p> <p>JC: 場所がおかしく、Noise のパートに続けられたいと考えますので再検討ください。Please review this because it is considered this shall be continued after the part of Noise. NK: Moved to 2.1.3 (3).</p>	
<p>2.2 工事現場周辺の危害防止</p> <p>請負者は、工事現場周辺における第三者への危害防止のために、下記の措置を講じなければならない。→ E2.2.1(a)に規定済み</p> <p>2.2.1 工事区域の立入防止施設</p>	<p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1.General</p> <ol style="list-style-type: none"> (1) The Contractor is reminded of his obligations under GC 4.8 [Safety Procedures] and GC 4.22 [Security of the Site] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site. (2) Unauthorised persons in this context shall mean persons who should not be on the Site. (3) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site. (4) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary request their assistance to remove any trespassers from the Site. (5) Such measures shall include (but are not restricted to) the following requirements of this Section. <p>2.2.2. Secure Site Perimeter</p>	<p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1. General</p> <ol style="list-style-type: none"> (1) The Contractor is reminded of his obligations under GC 4.8 [Safety Procedures] and GC 4.22 [Security of the Site] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site. (2) Unauthorised persons in this context shall mean persons who should not be on the Site. JC: 解説のため不要。As this (2) is definition, so deleted. NK: Deleted. (3) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site. (4) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary request their assistance to remove any trespassers from the Site. (5) Such measures shall include (but are not restricted to) the following requirements of this Section. <p>2.2.2. Secure Working Area Perimeter</p> <p>JC: Site であっても工事をしていなければ除外するべきだし、Site でなくても工事をしていれば遵守する、そういう意味では working area の方が適切。 The place in the Site where no work is done shall be excluded and place where work is done though it is not in</p>	<p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1.General</p> <ol style="list-style-type: none"> (1) The Contractor is reminded of his obligations under GC 4.8 [Safety Procedures] and GC 4.22 [Security of the Site] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site. (2) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site. (3) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary request their assistance to remove any trespassers from the Site. (4) Such measures shall include (but are not restricted to) the following requirements of this Section. <p>2.2.2. Secure Site Perimeter</p>

<p>請負者は第三者立入禁止の場所、工事現場の周囲及び危険箇所に、柵・仮囲い等の立入り防止施設を設置することにより、請負者の要員及び第三者に対して工事区域を明確にするため、以下の措置を取らなければならない。→E2.2.1(1)(a)に規定済み</p> <p>(1) 立入防止施設は、損傷・腐食等のない材料のものとし、第三者(特に子供)が容易に侵入できないような構造とすること。→E2.2.1(2)に規定済み(内容は少々異なっている)</p> <p>(2) 立入防止施設、工事看板、照明器具等の保守管理を行うこと。→E2.2.1(d)に規定済み</p> <p>(3) 立入防止施設に設けた出入口は、施錠できるようにすること。→E2.2.1(c)に規定済み</p> <p>(4) 道路に近接して掘削等により開口している箇所がある場合には、蓋をするか防護柵を設置して転落防止措置を講じること。→E2.2.2(4)に規定済み</p> <p>(5) 柵・仮囲いの高さ、長さ及び仕様は、本仕様書 Annex X の規定に従うこと。→E2.2.2(3)に規定済み</p>	<p>(1) Unless otherwise stated in the Contract, the Contractor shall:</p> <p>(a) Enclose the perimeter of the Site with secure fencing to prevent access to the Site by unauthorised persons;</p> <p>(b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas;</p> <p>(c) Provide secure entry points with lockable gates or barrier; and</p> <p>(d) Provide and maintain signs clearly advising/warning against entry.</p> <p>(2) Unless otherwise specified in the Contract, Site perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.</p>	<p>the site. Shall be included in places to follow the requirements. Therefore “working area” is suitable for this Clause.</p> <p>MM: 2.2.2 Secure Site Perimeter Secure Working Area Perimeter is specified in JSSS 2.3 Prohibition of Entry - Dangerous Work, the title of 2.2.2 will be left as it is.</p> <p>The Site perimeter fencing will be described in the User Guide and Particular Safety Specification stating requirements when the Site is of long perimeter such as railway or road project.</p> <p>NK: The title is as it is.</p> <p>(1) Unless otherwise stated in the Contract, the Contractor shall:</p> <p>JC: 日本語の 2.2.1 に記述したような原則として守らねばならないことを、きちんと記述してください。そのうえで仕様書に具体的な使用を Annex に記載するよう規定してください。As described in Japanese 2.2.1, please clearly specify requirements in principle and specify concrete requirements in Annex.</p> <p>NK: Japanese version specified as follows: (1) establish the construction area as specified in the Contract by installing temporary fences, enclosures and other entry prevention facilities at places such as where entry by third-party is prohibited, around construction sites and at dangerous places,</p> <p>NK: The description will be modified as right following the comments:</p> <p>(a) Enclose the perimeter of the Site with secure fencing to prevent access to the Site by unauthorised persons;</p> <p>(b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas;</p> <p>JC: throughout the execution of the Worksの方が適切なので修正。他の箇所でも同じ記載があれば同様に統一願います。“throughout the execution of the Works” is more suitable wording. Please change if there are other part with same expression.</p> <p>NK: This has been discussed and concluded to use “the Time for Completion” as it is contractually defined word.</p> <p>(c) Provide secure entry points with lockable gates or barrier; and</p> <p>(d) Provide and maintain signs clearly advising/warning against entry.</p> <p>(2) Unless otherwise specified in the Contract, Site perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.</p>	<p>The Contractor shall secure the perimeter of the Site to prevent access to the Site by unauthorised persons as specified below unless otherwise stated in the Particular Safety Specification.</p> <p>(1) Fencing</p> <p>(a) Enclose the perimeter of the Site with secure fencing;</p> <p>(b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas;</p> <p>(c) Provide secure entry points with lockable gates or barrier; and</p> <p>(d) Provide and maintain signs clearly advising/warning against entry.</p> <p>(2) Site perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.</p>
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<p>2.2.2 道路占用時の措置</p> <p>請負者は、工事のために道路を占用する場合には、発注者による関係当局との事前調整結果に基づき、当該道路での安全で円滑な交通を確保するため、次の措置を講じなければならない。→E2.2.3(1)に規定済み</p> <p>(1) 道路占用に先立ち、道路占用計画を作成し関係当局から必要な許可をとること。→E2.2.3(1)(a)に規定済み</p> <p>(2) 道路の交通止め、もしくは通行制限が必要な場合には、実施前に関係当局の承認と必要な許可を得ること。→E2.2.3(1)(b)に規定済み</p> <p>(3) 道路占用の全期間を通じて、道路での安全で円滑な交通を、妨げないように配慮すること。→2.2.3(1)(c)に規定済み</p> <p>(4) 看板、標識、バリケードその他立入防止施設は、使用が許可されたものを設置し、これら設備の点検、保守及び撤去を行うこと。→規定なし。理由：規定しない理由は記されていないが、2.1.4(2)と重複するからであると思われる。→(NKの方針：このまま規定なしとする。)</p> <p>(5) 夜間照明、保安灯は、常に点検を行い、保守管理を行うこと。→規定なし。理由：上記(4)と同様。→(NKの方針：このまま規定なしとする。)</p>	<p>(3) Full details of Site perimeter fencing including scope, dimensions and specifications shall be given in the Technical Specification of the Bidding Documents in accordance with Annex 1.3: [Required Amendments to "JICA Standard Bidding Documents"].</p> <p>(4) The Contractor shall provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations outside the Site perimeter.</p> <p>2.2.3. Measures for Road Occupation</p> <p>(1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:</p>	<p>(3) For full details of working area perimeter fencing including scope, dimensions and specifications, the contractor shall refer to the relevant part of the Technical Specification as indicated in Annex **.</p> <p>(4) Full details of Site perimeter fencing including scope, dimensions and specifications shall be given in</p> <p>JC: 何で工事区域の外に掘っているのか？ 道路に近接して掘削等により開口している箇所がある場合には、蓋をするか防護柵を設置して転落防止措置を講じること。2.2.3(d)に同じこと書いてある。→perimeterの話ではないので削除してください。</p> <p>Please delete (4) because this is not for perimeter and 2.2.3(d) specified same.</p> <p>NK Deleted.</p> <p>2.2.3. Measures for Road Occupation</p> <p>(1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:</p> <p>JC: 公的機関との調整 <u>legally constituted public authorities</u> と同じ？→他章と表現ぶりの統一が必要であり確認願います。</p> <p>Coordination of public authorities. Is this same as legally constituted public authorities. →Please confirm and use consistent term.</p> <p>NK: Chapter 1, 3 uses as follows:</p> <p>1.24.7 The emergency contact (2) <u>Relevant government authorities and agencies, administrative agencies</u>, police stations, ambulance and fire stations, and the like.</p> <p>1.25.2 Members of the Contractor's Safety Committee shall include: (8) (If necessary) Representatives of <u>the relevant government authorities and agencies</u>.</p> <p>Engineer of a copy of this certificate.</p> <p>1.37.8. UXO notify the Engineer and <u>relevant authorities</u>. Work shall resume when the Contractor has received instructions from the Engineer and <u>relevant authorities</u>.</p> <p>Annex 1.2: Content of Safety Plan at Bid Stage (13) Safety Information Sharing and Communications Policy between the Contractor and Employer, Engineer and <u>relevant government agencies</u>, etc</p> <p>3.1. UNDERGROUND AND CONCEALED SERVICES</p>	<p>(3) Full details of Site perimeter fencing including scope, dimensions and specifications shall be referred to the Particular Safety Specification.</p> <p>2.2.3.Measures for Road Occupation</p> <p>(1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:</p>
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	<p>(a) Prepare a road usage plan and submit it to the relevant authorities, and obtain necessary permits, prior to road use;</p> <p>(b) Obtain the approval of the relevant authorities and obtain the necessary permits before any road closure, diversion or other traffic restrictions are applied;</p> <p>(c) Take necessary measures to limit any restrictions to safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(e) Remove Contractor's Equipment during non-working periods (e.g. night time and weekends), store safely away from the works, provide temporary covers or barriers, lighting and warning signs, leave the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident; and</p> <p>(f) Comply with the traffic rules and regulations of the Country.</p> <p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [Spotters and Flagmen]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p>	<p>3.1.1. Generally (4) If any of these Underground or Concealed Services are the property of <u>a legally constituted public authority or a third party.</u></p> <p>4.3.2 Transportation to and Removal from Site (1) When transporting obtain all necessary prior permission from <u>the relevant authorities</u> including police, <u>road authority</u> before commencement of transportation</p> <p>NK: This Clause will be applied to works in roads owned by both public and private owners, therefore relevant authority is used tentatively NK will request MD to determine the terms and consistently use it in JSSS.</p> <p>(a) Prepare a road usage plan and submit it to the engineer and the relevant authorities, and obtain necessary permits, prior to road use;</p> <p>(b) <u>Obtain the approval of the relevant authorities and obtain the necessary permits</u> before any road closure, diversion or other traffic restrictions are applied;</p> <p>JC: 同じ内容を繰り返しているようなので、修正願います。It seems same content is repeated. Please revise it. (b)</p> <p>NK: Revised as right.</p> <p>(c) Take necessary measures to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(e) Remove Contractor's Equipment during non-working periods (e.g. night time and weekends), store safely away from the works, provide temporary covers or barriers, lighting and warning signs, leave the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident; and</p> <p>JC: working area が secure されている前提なので、そこに equipment が残っていること自体は問題ないと考える。 On the premise that the working area is secured, therefore it is not problem/issues for the equipment is left there.</p> <p>MM: 2.2.3 Measures for Road Occupation (e) "Remove Contractor's Equipment..." To be reviewed, clarified and left ii for now, it will be discussed again.</p> <p>NK: Added as the right.</p> <p>(f) Comply with the traffic rules and regulations of the Country.</p> <p>NK: (f) is specified in Chapter 1 1.4 JSSS – Laws, therefore,</p>	<p>(a) Prepare a road usage plan and submit it to the engineer and the relevant authorities, and obtain necessary permits, prior to road use;</p> <p>(b) Obtain the approval <u>and necessary permits of</u> the relevant authorities before any road closure, diversion or other traffic restrictions are applied;</p> <p>(c) Take necessary measures to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(e) Remove Contractor's Equipment during non-working periods (e.g. night time and weekends), store safely away from the works, provide temporary covers or barriers, lighting and warning signs, leave the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident;</p> <p>(f) <u>In case the relevant authority approves the Contractor to store Contractor's Equipment safely during non-working periods (e.g. night time and weekends), provide temporary barriers, lighting and warning signs, keep the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident; and</u></p>
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<p>2.2.3 看板・標識の整備</p> <p>請負者は、工事現場周辺に必要な情報を明示するために次の措置を講じなければならない。→E2.2.4(1)に規定済み</p> <p>(1) 道路上に設置する工事看板、迂回路案内板等の各種標識類は、当該国の標準のものを使用し、所定の場所に交通の支障とならないよう設置し、振動や風等で壊れたり倒れたりしないようなものとし、しっかり固定すること。→E2.2.4(1)(a)(c)に規定済み</p> <p>(2) 各種標識類は、運転者及び歩行者の見やすい場所に設置すること。また、夜間において遠方から確認し得るよう照明又は反射装置を設置すること。→E2.2.4(1)(b)及び2.2.4(2)に規定済み</p> <p>(3) 各種標識類は、修繕、塗装、清掃等の保守管理を常時行う。→E2.2.4(2)に規定済み</p> <p>2.2.4 工事現場出入口付近での交通事故防止</p> <p>請負者は、工事現場出入口付近での交通事故防止のために、次の措置を講じなければならない。→E2.2.5(1)に規定済み</p> <p>(1) 工事車両の出入口には、通行車両等が接近時に出入口があることが事前に認識できる距離に警告看板を設けるとともに、出入口には、交通誘導員を適切に配置し、工事車両とともに一般車両及び歩行者に対しても必要な誘導を行うこと。→E2.2.5(1)(a)(b)に規定済み</p> <p>(2) 出入口では、歩行者及び一般交通を優先すること。→E2.2.5(2)に規定済み</p> <p>2.2.5 地域住民とのコミュニケーション</p>	<p>2.2.4. Temporary Road Signs</p> <p>(1) For disseminating necessary information on roads adjacent to the Site, the Contractor shall:</p> <p>(a) Provide standard road signs in the same colours and format as those used by the road authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs;</p> <p>(b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(2) Maintain the various signs regularly, including repairing, painting and cleaning, and ensuring that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5. Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect against accident.</p> <p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p>	<p>deleted.</p> <p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [Spotters and Flagmen]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4. Temporary Road Signs</p> <p>(1) For disseminating necessary information adjacent to the Site, the Contractor shall:</p> <p>(a) Provide standard road signs in the same colors and format as those accepted by the road authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs;</p> <p>(b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(2) Maintain the various signs regularly, including repairing, painting and cleaning and ensuring that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5. Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect them against accident.</p> <p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p>	<p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [Spotters and Flagmen]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4. Temporary Road Signs</p> <p>(1) For disseminating necessary information on roads adjacent to the Site, the Contractor shall:</p> <p>(a) Provide standard road signs in the same colours and format as those used by the road authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs;</p> <p>(b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(2) Maintain the various signs regularly, including repairing, painting and cleaning, and ensuring that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5. Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect against accident.</p> <p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p>
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<p>請負者は、工事現場周辺の地域住民とのコミュニケーションを図るために、次の措置を講じなければならない。→E2.2.6(1)に規定済み</p> <p>(1) 工事着手前に、周辺住民への工事概要の周知に関して発注者に協力すること→E2.2.6(1)(a)に規定済み</p> <p>(2) 工事場所が学校施設近辺にある場合には、請負者は、本契約で別途定めるところに従い、近隣住民に対して交通安全にかかわる啓蒙活動を行うとともに、請負者の要員に対して特に登下校時の工事車両の通行に関するルール・留意事項を周知すること。→E2.2.6(1)(b)及び2.2.6(2)に規定済み</p> <p>(3) 工事中に周辺住民等から、請負者に対する苦情又は要望があったときは、請負者はエンジニアに直ちに報告すること。→E2.2.6(3)に規定済み</p>	<p>2.2.6. Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community before commencing construction; and</p> <p>(b) Conduct traffic safety and awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>	<p>2.2.6. Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community before commencing construction; and</p> <p>(b) If so required in the Technical Specifications, conduct traffic safety and awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>	<p>2.2.6. Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community; and</p> <p>(b) If so required in the Particular Safety Specification, conduct traffic safety and awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>
<p>2.3 立入禁止の措置</p> <p>(1) 請負者は、当該作業に従事する者及び立入りを許可された者以外の下記の場所への立入りを禁止し、見やすい箇所に具体的な危険の内容と共にその旨を標示しなければならない。→E2.3.1(2)及び2.3.2(1)に規定済み</p> <p>(a) 当該作業者が十分に注意を払いながら、危険な作業を行っている場所→そのままの規定はないが、2.3.3の内容と重複する部分が多い。下記2.3(2)(a)～(f)参照。→(NKの方針:このまま規定なしとする。)</p> <p>(c) 当該作業者以外の者が立入ると、作業をしている者に危険が生じるおそれのある場所→E2.3.3(4)に規定済み</p> <p>(2) 請負者は、保護具の装備をしないで立ち入ると健康等に支障がある下記のような有害な作業箇所には、事前に作業許可を与えた請負者の要員以外の者を立ち入らせないようにするとともに、必要に応じ立入防止施設(柵、仮囲い等)または監視人を配置しなければならない。→E2.3.2(1)(2)に規定済み</p> <p>(a) 多量の高熱物体を取り扱う場所又は著しく暑熱な場所→E2.3.3(5)に規定済み</p> <p>(p) 多量の低温物体を取り扱う場所又は著しく寒冷な場所→E2.3.3(5)に規定済み</p> <p>(q) 有害な光線又は超音波にさらされる場所→E2.3.3(6)に規定済み</p>	<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1. General</p> <p>(1) For general requirements of Dangerous work refer to JSSS 1.19 [Dangerous Work].</p> <p>(2) The Contractor shall prohibit non-authorized Contractor's Personnel, non-authorized Employer's Personnel or and any other non-authorized persons from entering areas where Dangerous Work (as defined in JSSS Annex 1.1 [Definitions and Abbreviations]) is being undertaken.</p> <p>(3) Non-authorized personnel in this context shall mean Contractor's Personnel, Employer's Personnel or any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official "permit to enter" issued to them by the HSO.</p>	<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1. General</p> <p>(1) For general requirements of Dangerous work refer to JSSS 1.19 [Dangerous Work].</p> <p>(2) The Contractor shall prohibit non-authorized personnel from entering areas where Dangerous Work is being undertaken.</p> <p>(3) Non-authorized personnel in this context shall mean Contractor's Personnel, Employer's Personnel or any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official "permit to work" issued to them by the HSO.</p> <p>IC: (1)とすべき(順番がおかしい)(3)(2)(1)の順番に変更してください。: Please change order as (3)(2)(1) as the order of (3) is strange.</p> <p>MM: 2.3.1 General (3) "Permit to enter (work)" NK will prepare a list of permits required with agreed names and any requirements and will then draft a clause requiring the Contractor to prepare a "Permit to Work" system.</p> <p>NK: The order is changed. Added (4) regarding <u>permits to work</u> as right.</p>	<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1.General</p> <p>(1) Non-authorized personnel in this context shall mean Contractor's Personnel, Employer's Personnel or any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official "permit to work" issued to them by the HSO.</p> <p>(2) The Contractor shall prohibit non-authorized personnel from entering areas where Dangerous Work is being undertaken.</p> <p>(3) For general requirements of Dangerous work refer to JSSS 1.19 [Dangerous Work].</p> <p>(4) The Contractor shall prepare permits to work according to characteristics of the Dangerous Work referring to the requirements of OSHA Subpart AA-Confined Spaces in Construction, § 1926.1204 Permit-required confined space program, § 1926.1205 Permitting process, and § 1926.1206 Entry permit.</p>

<p>(r) 酸素濃度、硫化水素濃度及び炭酸ガス濃度が 2.1.6(作業環境の把握)に規定する基準に抵触する場所、→E2.3.3(7)に規定済み</p> <p>(s) ガス、蒸気又は粉じんを発散する有害な場所 →E2.3.3(7)に規定済み</p> <p>(t) 有害物を取り扱う場所→E2.3.3(7)に規定済み</p> <p>(3) 請負者は、下記のような場所への立入りを禁止し、見やすい箇所に具体的な理由と共にその旨を標示するとともに、立入防止施設(柵、仮囲い等)または監視人を配置しなければならない。→E2.3.1(2)及び 2.3.2(1)に規定済み</p> <p>(b) 一時的に作業が行われない場所(仮設構造物を含む)で、立ち入った者に危険が及ぶ恐れのあるもの→E2.3.3(8)に規定済み</p> <p>(u) 工事中に地雷、不発弾、有毒ガス等の危険物の存在が確認された場所→E2.3.3(1)に規定済み</p> <p>(v) その他、一時的に立入禁止とすることが必要となる事由が発生した場所→規定はない。但し、2.3.3(3)(9)(10)に具体的に場所を規定している。→(NKの方針: ここには規定なしとする。)</p>	<p>2.3.2. Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of non-authorized personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>2.3.3. Further Definition</p> <p>For clarity Dangerous Work is understood also to include for example:</p> <p>(1) The detection, safe removal and disposal of Unexploded Ordnance as referred to in JSSS 1.36 [Unexploded Ordnance].</p> <p>(2) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals, gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p> <p>(3) Welding work, hot cutting work or demolition work.</p> <p>(4) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorized personnel enter.</p> <p>(5) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold</p>	<p>2.3.2. Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of non-authorized personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>JC: 外に配置して、作業員のモニターするのは無理では？ outside the working area 条件は(1)に、(1)とは誘導のための spotter を配置するのかと。ここまでは Flagman で良いのでは(次からまとめている)</p> <p>Is it possible to monitor the personnel placing spotter outside the working area?</p> <p>The clause (1) is to place a spotter to guide. Flagmen may be more suitable for this task. (After this, these two are combined or mixed up.”</p> <p>NK: Spotter is defined as both Spotter and Flagman in 2.4.1. The Spotter does not monitor inside but prevent the entry of non-authorized personnel at “outside of the working area”. No change is made.</p> <p>2.3.3. Further Definition Example of Dangerous Work</p> <p>JC: 事例を書いているだけなので example of dangerous work などのタイトルの方が良い。</p> <p>As it describes only examples, it is better to put title such as “example of dangerous work”.</p> <p>NK: Modified as commented.</p> <p>For clarity Dangerous Work is understood also to include for example:</p> <p>MM: 2.3.3 Further Definitions of Dangerous Work (Example of Dangerous Work)</p> <p>The original items (1) to (10) will be left as they are. The (1) “unexploded ordnance” will be further considered.</p> <p>NK: (2) to (10) are left as they are.</p> <p>(1) The detection, safe removal and disposal of Unexploded Ordnance as referred to in JSSS 1.36 [Unexploded Ordnance].</p> <p>JC: 不発弾の処理をコントラクターが行うことはしない。The Contractor never handle unexploded ordnance himself.</p> <p>NK: (1) is deleted.</p> <p>(2) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals,</p>	<p>2.3.2. Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of non-authorized personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>2.3.3. Example of Dangerous Work</p> <p>For clarity Dangerous Work is understood also to include the following for example:</p> <p>(1) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals,</p>
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	<p>(6) Work in areas where there is potential exposure to harmful radiation or ultrasound.</p> <p>(7) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment].</p> <p>(8) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.</p> <p>(9) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.</p> <p>(10) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.</p>	<p>gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p> <p>(3) Welding work, hot cutting work or demolition work.</p> <p>(4) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter.</p> <p>(5) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold.</p> <p>(6) Work in areas where there is potential exposure to harmful radiation or ultrasound.</p> <p>(7) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment].</p> <p>(8) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.</p> <p>(9) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.</p> <p>JC: そもそもそういう環境の下で工事をする設定にはならず、環境を整えるのは発注者の責務。Any work shall not be arranged to execute under such circumstances. It is the Employer's responsibility to prepare</p> <p>NK: MM recorded to leave as it is, so it is left now.</p> <p>(10) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.</p>	<p>gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p> <p>(2) Welding work, hot cutting work or demolition work.</p> <p>(3) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter.</p> <p>(4) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold</p> <p>(5) Work in areas where there is potential exposure to harmful radiation or ultrasound.</p> <p>(6) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment].</p> <p>(7) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.</p> <p>(8) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.</p> <p>(9) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.</p>
<p>2.4 監視員、誘導員の配置</p> <p>2.4.1 監視員、誘導員の配置</p> <p>(1) 請負者は、作業員の危険防止又は機械の安全な運行、使用のために現場の状況、作業の方法に応じて、適宜監視員、誘導員を配置しなければならない。→E2.4.3(1)に規定済み</p> <p>(2) 請負者は、監視員、誘導員に対して、現場状況、危険防止について十分周知し、監視・誘導の作業内容を指示しなければならない。→E2.4.3(2)に規定済み</p> <p>2.4.2 合図の統一</p> <p>(1) 請負者は、作業員と監視員・誘導員との間で、すみやかに有効な情報伝達を行うための合図を定め</p>	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>Spotter and Flagman are defined in JSSS Annex 1.1 [Definitions and Abbreviations].</p> <p>In accordance with the definition, a reference to either person in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p>	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>Spotter and Flagman are defined in JSSS Annex 1.1 [Definitions and Abbreviations].</p> <p>In accordance with the definition provided in JSSS Annex 1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p> <p>JC: Modified.</p>	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>In accordance with the definition provided in JSSS Annex 1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p>

<p>なければならぬ。請負者は、請負者の要員にこの合図に従わせなければならぬ。→E2.4.5(1)(2)に規定済み</p> <p>(2) 請負者は、定められた合図を請負者の要員に、次の方法で周知しなければならない。→E2.4.5(3)に規定済み</p> <p>(a) (a) 新規に入場した請負者の要員、新規に誘導員に指名された者に対しては、当該作業に関する合図について教育すること。→E2.4.5(3)(a)に規定済み</p> <p>(b) (b) 毎日の当該作業の開始前に、定められた合図について請負者の要員に再確認をすること。→E2.4.5(3)(b)に規定済み</p> <p>(c) (c) 標準の合図を示す看板を作成し、現場内に掲示するとともに当該機械にも同様の掲示する等により周知を図ること。→E2.4.5(3)(c)に規定済み</p>	<p>2.4.2. Duties</p> <p>Duties include for example:</p> <ol style="list-style-type: none"> (1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out. (2) Giving appropriate guidance and signals during construction equipment operations to preventing the construction equipment tipping, overturning or falling. (3) Giving appropriate guidance and signals to prevent the Contractor's Personnel from being struck or pinned by construction equipment. (4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing. (5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines. (6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's Equipment is working, construction operations are proceeding, vehicles are passing or where accidents may be likely to occur. (7) Monitoring working locations and conditions and alerting relevant Contractor's Personnel if necessary. (8) Any other similar duties and assistance. <p>2.4.3. Placement</p> <ol style="list-style-type: none"> (1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed. (2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention. <p>2.4.4. Safety</p> <p>The Contractor shall:</p> <ol style="list-style-type: none"> (1) Ensure the safety of Spotters when directing vehicles or Contractor's Equipment. (2) Ensure that Spotters and drivers agree on hand signals before backing up. 	<p>2.4.2. Duties</p> <p>Duties include for example:</p> <ol style="list-style-type: none"> (1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out. (2) Giving appropriate guidance and signals during construction equipment operations to preventing the construction equipment tipping, overturning or falling. (3) Giving appropriate guidance and signals to prevent the Contractor's Personnel from being struck or pinned by construction equipment. (4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing. (5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines. (6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's Equipment is working, construction operations are proceeding, vehicles are passing or where accidents may be likely to occur. (7) Monitoring working locations and conditions and alerting relevant Contractor's Personnel if necessary. (8) Any other similar duties and assistance. <p>2.4.3. Placement</p> <ol style="list-style-type: none"> (1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed. 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(4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing. (5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines. (6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's Equipment is working, construction operations are proceeding, vehicles are passing or where accidents is likely to occur. (7) Monitoring working locations and conditions and alerting relevant Contractor's Personnel if necessary. (8) Any other similar duties and assistance. <p>2.4.3. Placement</p> <ol style="list-style-type: none"> (1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed. (2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention. <p>2.4.4. Safety</p> <p>The Contractor shall:</p> <ol style="list-style-type: none"> (1) Ensure the safety of Spotters when directing vehicles or Contractor's Equipment. (2) Ensure that Spotters and drivers agree on hand signals before reversing.
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- (3) Instruct Spotters to maintain visual contact at all times with the driver while the vehicle is reversing.
- (4) Instruct drivers to stop reversing immediately if they lose sight of the Spotter.
- (5) Not give Spotters additional duties while they are already acting as Spotters.
- (6) Instruct Spotters not to use personal mobile phones, personal headphones, or other items which could pose a distraction during spotting activities.
- (7) Provide Spotters with high-visibility clothing, especially during night operations.

2.4.5. Signals

- (1) To avoid the risk of injury to the Contractor's Personnel when operating Contractor's Equipment, the Contractor shall establish a standardised signal system and appoint a Spotter to give necessary signals to the Contractor's Personnel.
- (2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.
- (3) The Contractor shall inform and remind all Contractor's Personnel of the established standardised signal system as follows:
 - (a) By training all Contractor's Personnel including those designated as Spotters at the time they first enter the Site of the signals;
 - (b) By re-confirming with the Contractor's Personnel, the established standardised signal system in the TBM before the start of the work each day; and
 - (c) By posting signboards on Site where required showing the standard signals and sticking a smaller-sized version directly on the concerned Contractor's Equipment.

2.4.6. Qualification of Personnel

The Contractor shall ensure that all Spotters possess sufficient experience and ability and are adequately

non-native に分かるように修正願います。

JICA: Its (baking up) meaning is not clear. Reversing is mentioned in (3). Change? Please revise it for non-native to be able to understand.

NK: (2) states about "hand signals", whereas (3) emphasises the importance of "eye contact" when reversing vehicles. To change "backing up" to "reversing".

- (3) Instruct Spotters to maintain visual contact at all times with the driver while the vehicle is reversing.
- (4) Instruct drivers to stop reversing immediately if they lose sight of the Spotter.
- (5) Not give Spotters additional duties while they are already acting as Spotters.
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- (2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.
- (3) The Contractor shall inform and remind all Contractor's Personnel of the established standardised signal system as follows:
 - (a) By training all Contractor's Personnel including those designated as Spotters at the time they first enter the Site of the signals;
 - (b) By re-confirming with the Contractor's Personnel, the established standardised signal system in the TBM before the start of the work each day; and
 - (c) By posting signboards on Site where required showing the standard signals and sticking a smaller-sized version directly on the concerned Contractor's Equipment.

2.4.6. Qualification of Personnel

The Contractor shall ensure that all Spotters possess sufficient experience and ability and are adequately trained and supervised to perform their duties.

- (3) Instruct Spotters to maintain visual contact at all times with the driver while the vehicle is reversing.
- (4) Instruct drivers to stop reversing immediately if they lose sight of the Spotter.
- (5) Not give Spotters additional duties while they are already acting as Spotters.
- (6) Instruct Spotters not to use personal mobile phones, personal headphones, or other items which could pose a distraction during spotting activities.
- (7) Provide Spotters with high-visibility clothing, especially during night operations.

2.4.5. Signals

- (1) To avoid the risk of injury to the Contractor's Personnel when operating Contractor's Equipment, the Contractor shall establish a standardised signal system and appoint a Spotter to give necessary signals to the Contractor's Personnel.
- (2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.
- (3) The Contractor shall inform and remind all Contractor's Personnel of the established standardised signal system as follows:
 - (a) By training all Contractor's Personnel including those designated as Spotters at the time they first enter the Site of the signals;
 - (b) By re-confirming with the Contractor's Personnel, the established standardised signal system in the TBM before the start of the work each day; and
 - (c) By posting signboards on Site where required showing the standard signals and sticking a smaller-sized version directly on the concerned Contractor's Equipment.

2.4.6. Qualification of Personnel

The Contractor shall ensure that all Spotters possess

	<p>trained and supervised to perform their duties.</p> <p>2.4.7. Radios</p> <p>The Contractor shall provide and maintain any necessary equipment such as hand-held radios to ensure effective and safe communications and train all personnel in their use.</p> <p>2.4.8. PPE</p> <p>The Contractor shall ensure that all spotters, flagmen and signalmen are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>	<p>2.4.7. Radios Communication tools</p> <p>The Contractor shall shall provide and maintain any necessary equipment such as hand-held radios to ensure effective and safe communications and train all personnel in their use.</p> <p>JC: ここは必要に応じてという記載が正しいのでは？ Isn't it proper to mention "when necessary"?</p> <p>NK: Agreed. Added.</p> <p>JC: walky-talky はいらないでしょうか。 JICA: Isn't walky-talky necessary?</p> <p>NK: Walky-talky is more common recently and almost same as hand-held radios. Thus, "walkie-talkies" is added to "hand-held radios".</p> <p>JC: 不明瞭。明確に記載願います。 Please clearly mention this (all personnel).</p> <p>NK: In order to specify, add "assigned to Spotters".</p> <p>The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, walkie-talkies to ensure effective and safe communications and train all personnel assigned to Spotters in their use.</p> <p>2.4.8. PPE</p> <p>The Contractor shall ensure that all spotters, flagmen and signalmen Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p> <p>JC: Spotters だけの記載や、このように 3 種類の記載など、複数のパターンがあるので、統一願います。</p> <p>Please specify unified terms as there is different usage of "only" Spotters", and "all spotters, flagmen and signalmen".</p> <p>NK: As defined in 2.4.1 that Spotters include both Spotters and Flagman, Spotters will be consistently used.</p>	<p>sufficient experience and ability and are adequately trained and supervised to perform their duties.</p> <p>2.4.7. Radios Communication tools</p> <p>The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, walkie-talkies to ensure effective and safe communications and train all personnel assigned to Spotters in their use.</p> <p>2.4.8. PPE</p> <p>The Contractor shall ensure Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>
<p>2.5 墜落防止</p> <p>2.5.1 一般事項</p> <p>(1) 請負者は、墜落の危険がある作業を行う場合は、必要な墜落防止措置について、関連の作業計画書及び安全衛生詳細計画書に記載し、エンジニアのレビューを受けなければならない。→規定なし。 (レビューの妥当性が問題)→(NKの方針: このまま規定なしとする。)</p>	<p>2.5 FALL PREVENTION</p> <p>2.5.1. General Items</p> <p>(1) Falls are the leading cause of accident and fatality in the construction industry, accounting for more than 40% of all construction fatalities in Japan and it is emphasised therefore that particular consideration be given by the Contractor and appropriate measures selected and used to avoid this risk.</p>	<p>2.5 FALL PREVENTION</p> <p>2.5.1. General Items</p> <p>(1) Falls are the leading cause of accident and fatality in the construction industry, accounting for more than 40% of all construction fatalities in Japan and it is emphasised therefore that particular consideration be given by the Contractor and appropriate measures selected and used to avoid this risk.</p> <p>JC: 解説のため削除 Delete, because this is an explanation. MM: The (1) will be described in User Guide. User Guide and Requirements will be clearly separated. NK: Deleted.</p>	<p>2.5 FALL PREVENTION</p> <p>2.5.1. General</p>

<p>(2) 請負者は、墜落防止に関する当該国の法律及び本仕様書のいずれにも規定が無い事項は、米国 OSHA 規則 Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection を参照して、必要と判断する措置を講じなければならない。→E2.5.1(2)に規定済み。(2.5.1(2)(a)～(g)に参照先を記述している。)</p> <p>(3) 本節は通路、足場・作業床、作業床端・開口部からの墜落防止、また掘削、ロープ高所作業における墜落防止に関する事項を規定し、物体の飛来、落下による災害防止のための規定は本仕様書 2.6 [飛来落下の防止措置]、昇降設備・足場等の設備の材料、構造、設置・解体時の留意事項、点検等に関する規定は本仕様書 5.4[足場等]及び本仕様書 5.5[通路・昇降設備・栈橋]にて規定する。→E2.5.1(4)に規定済み</p> <p>2.5.2 通路からの墜落防止措置</p> <p>(1) 安全な通路の設置</p> <p>請負者は、作業場に通ずる場所及び作業場内には、作業員が使用するための安全な通路を設け、かつ、これを常時有効に保持しなければならない。また、主要な通路には、これを保持するため、通路の表示を行わなければならない。→E2.5.6(1)に規定済み</p> <p>(2) 架設通路</p> <p>請負者は、架設通路の墜落の危険のある箇所には、次に掲げる設備(丈夫な構造の設備であって、たわみが生ずるおそれがなく、かつ、著しい損傷、変形又は腐食がないものに限る)又はこれらと同等以上の機能を有する墜落防止設備を設置しなければならない。→E2.5.5(3)に規定済み</p> <p>(a) 高さ 85cm 以上の手すり→E2.5.5(1)に規定済み</p> <p>(b) 高さ 35cm 以上 50cm 以下の中棧→E2.5.5(2)に規定済み</p> <p>(3) 作業の必要上、臨時に墜落防止設備を取り外す場合の措置</p> <p>請負者は、次の措置を講じなければならない。→E2.5.6(3)に規定済み</p> <p>(a) 墜落制止用器具を安全に取り付けるための設備等を設け、かつ、作業員に墜落制止用器具を使用させる措置又はこれと同等以上の効果を有する措置を講ずること。→E2.5.6(3)(c)に規定済み</p> <p>(b) 前項の措置を講ずる箇所には、関係作業員以外の作業員を立ち入らせないこと。→E2.5.6(3)(d)に規定済み</p> <p>(c) 取り外す必要がなくなった後は、直ちにこれらの設備を原状に復すること。→E2.5.6(3)(e)に規定済み</p> <p>2.5.3 足場・作業床からの墜落防止措置</p> <p>(4) 請負者は、高さが 2m 以上の箇所(作業床の端、開</p>	<p>(2) By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements for fall prevention as specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M - Fall Protection of "Part 1926 - Safety and Health Regulations for Construction" and as follows:</p> <p>(a) Requirements relating to fall protection for employees working on scaffolds shall comply with subpart L.</p> <p>(b) Requirements relating to fall protection for employees working on cranes and derricks shall comply with subpart CC.</p> <p>(c) Fall protection requirements for employees performing steel erection work (except for towers and tanks) shall comply with subpart R.</p> <p>(d) Requirements relating to fall protection for employees working on certain types of equipment used in tunnelling operations shall comply with subpart S.</p> <p>(e) Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers shall comply with §1926.105.</p> <p>(f) Requirements relating to fall protection for employees working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment shall comply with Subpart V.</p> <p>(g) Requirements relating to fall protection for employees working on stairways and ladders are provided in subpart X.</p>	<p>(2) By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements for fall prevention as specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M - Fall Protection of "Part 1926 - Safety and Health Regulations for Construction" and as follows:</p> <p>JC: 参照して、の意より強くなってしまっているので、要修正。 This sentence become stronger than Japanese Draft which mentioned "shall refer to ..." Please revise it as Japanese draft JSSS.</p> <p>MM: 1 月の議事録では次の様に遵守することとしています。 2.5.1 General "comply with" or "refer to OSHA" The sentence of 2.5.1 will be "comply with".</p> <p>The description of when not relevant case, the Contractor can propose the Engineer alternative or waiver for approval." under JSSS 1.4.5 and 1.4.6.</p> <p>NK: Following the MM to specify "comply with", NK modified (2) and JICA sentences as (1) in right.</p> <p>(a) Requirements relating to fall protection for employees working on scaffolds shall comply with subpart L.</p> <p>JC: ・前コメントに同じ。shall comply with の表現は改めてください。As same as the above, please change "shall comply with" to "shall refer to".</p> <p>MM: As mentioned in the above MM "comply with".</p> <p>NK: NK modified as right.</p> <p>(b) Requirements relating to fall protection for employees working on cranes and derricks shall comply with subpart CC.</p> <p>(c) Fall protection requirements for employees performing steel erection work (except for towers and tanks) shall comply with subpart R.</p> <p>(d) Requirements relating to fall protection for employees working on certain types of equipment used in tunnelling operations shall comply with subpart S.</p> <p>(e) Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers shall comply with §1926.105.</p> <p>(f) Requirements relating to fall protection for employees working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment shall comply with subpart V.</p>	<p>(1) By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for fall prevention complying with those the technical requirements for fall prevention as specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M - Fall Protection of "Part 1926 - Safety and Health Regulations for Construction" and as follows:</p> <p>(a) Requirements relating to fall protection for employees workers working on scaffolds shall comply with in Subpart L - Scaffolds;</p> <p>(b) Requirements relating to fall protection for employees workers working on cranes and derricks shall comply with in Subpart CC - Cranes and Derricks in Construction;</p> <p>(c) Fall protection requirements for employees workers performing steel erection work (except for towers and tanks) shall comply with in Subpart R - Steel Erection;</p> <p>(d) Requirements relating to fall protection for employees wokers working on certain types of equipment used in tunnelling operations shall comply with in Subpart S - Underground Construction, Caissons, Cofferdams and Compressed Air;</p> <p>(e) Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers shall comply with in §1926.105 Safety nets;</p> <p>(f) Requirements relating to fall protection for employees wokers working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment shall comply with in Subpart V - Electric Power Transmission and</p>
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<p>口部等を除く。)で作業を行なう場合において墜落により作業員に危険を及ぼすおそれのあるときは、足場を組み立てる等の方法により作業床を設置しなければならない。→E2.5.8(1)に規定済み。(但し、2m 以上については 2.5.2 で規定)</p> <p>(5) 請負者は、作業床を設けることが困難なときは、墜落による作業員の危険を防止するため、次の措置を講じなければならない。→規定なし。以下(a)～(c)についても同様。本節の他の箇所で規定している内容と重複のためと考えられる。→(NK の方針: このまま規定なしとする。)</p> <p>(c) 作業員に墜落制止用器具を使用させること。</p> <p>(d) 墜落制止用器具を安全に取り付けるための設備を設けること。</p> <p>(e) 墜落制止用器具及びその取付け設備等の異常の有無について、随時点検を行うこと。</p> <p>(6) 請負者は、作業員に墜落の危険を及ぼすおそれのある箇所には、次の足場に応じて、それぞれ次に掲げる設備(丈夫な構造の設備であり、たわみが生ずるおそれがなく、かつ、著しい損傷、変形又は腐食がないものに限る。)又はこれらと同等以上の機能を有する墜落防止設備を設置しなければならない。→規定なし。以下(a)～(b)についても同様。→(NK の方針: 2.5.8 に加えて記述すべき。)</p> <p>(a) わく組足場(妻面に係る部分を除く。)</p> <p>交差筋かい及び高さ 15cm 以上 40cm 以下の棧又は高さ 15cm 以上の幅木</p> <p>(b) わく組足場以外の足場、及びわく組足場の妻面</p> <p>本仕様書 2.5.2(2)に規定する手すり及び中棧</p> <p>(7) 請負者は、作業の性質上、墜落防止設備を設けることが著しく困難な場合又は作業の必要上臨時に墜落防止設備を取り外す場合、次の措置を講じなければならない。→規定なし。以下(a)～(b)についても同様。→(NK の方針: 2.5.8 に加えて記述すべき。)</p> <p>(a) 墜落制止用器具を安全に取り付けるための設備を設け、かつ、作業員に墜落制止用器具を使用させる措置又はこれと同等以上の効果を有する措置を講ずること。</p> <p>(b) 前項の措置を講ずる箇所に、関係作業員以外の作業員を立ち入らせないこと。</p>	<p>(3) The Contractor shall develop safety procedures for personnel who are engaged in inspection, investigation, or assessment of workplace conditions prior to the actual start of construction work or after all construction work has been completed.</p> <p>(4) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(5) The Contractor must pay special attention to whether a restraint system (PFRS) or arrest (PFAS) system is required, noting the defined terms in Chapter 1 General for each of these systems.</p> <p>It is considered that “Prevention is better than cure” and as a general rule therefore, “fall restraint” is preferred over “fall arrest”.</p>	<p>comply with Subpart V.</p> <p>(g) Requirements relating to fall protection for employees working on stairways and ladders are provided in subpart X.</p> <p>(3) The Contractor shall develop safety procedures for personnel who are engaged in <u>inspection, investigation, or assessment of workplace conditions</u> prior to the actual start of construction work <u>or after all construction work has been completed</u>.</p> <p>JC: 何故 inspection 等に従事する要員のためだけにやるのでしょうか。May we know why develop safety procedure for personnel engaged only inspection, etc.</p> <p>NK: 作業場所の安全を確認する要員の安全確認手順の作成を要求しています。This is confirmation procedure to confirm the safety of the working places by personnel to confirm the site before the work. Modification is made as right to express the meaning correctly.</p> <p>JC: どういう意図? What is the intention of this sentence? (“or after all construction work has been completed” in the third line)</p> <p>NK: 作業が終わった場所の安全を、例えば型枠支保工の撤去後その場所が安全な状態にあるかを確認する意図です。This specifies to confirm the safety condition of the site after the work, for example to confirm the removal and materials of scaffolds and clearing of the site to avoid accident at the site after the work.</p> <p>(4) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(5) The Contractor must pay special attention to whether a restraint system (PFRS) or arrest (PFAS) system is required, noting the defined terms in Chapter 1 General for each of these systems.</p> <p>It is considered that “Prevention is better than cure” and as a general rule therefore, “fall restraint” is preferred over “fall arrest”.</p> <p>JC: modified below.</p> <p>As a general rule , the Contractor shall take “fall restraint” measures wherever practicable rather than “fall arrest” measures.</p> <p>NK modified as comment.</p> <p>(6) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS.</p> <p>JC: modified below.</p>	<p>Distribution; and</p> <p>(g) Requirements relating to fall protection for <u>employees wokers</u> working on stairways and ladders <u>are provided in</u> Subpart X - <u>Stairways and Ladders</u>.</p> <p>(2) The Contractor shall develop safety procedures for personnel who are engaged in inspection, investigation, or assessment <u>to confirm</u> the workplace conditions <u>for the safety of workers</u> prior to the actual start of construction work <u>or to confirm the site condition for the safety of workers</u> after all construction work has been completed.</p> <p>(3) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(4) The Contractor must pay special attention to whether a restraint system (PFRS) or arrest (PFAS) system is required, noting the defined terms in Chapter 1 General for each of these systems.</p> <p>(5) <u>As a general rule, the Contractor shall take “fall restraint” measures wherever practicable rather than “fall arrest” measures.</u></p> <p>(6) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS</p>
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	<p>(6) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS.</p> <p>2.5.2. Height Thresholds</p> <p>The threshold for fall protection in construction work is 2 m. The Contractor must provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3. Facilities for Ascending and Descending</p> <p>When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor's Personnel to safely access and descend from such work levels.</p> <p>2.5.4. Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p> <p>(1) Accordingly, and in advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk pre-assessment including checking the following and shall record the results:</p> <p>(a) Work areas and the conditions of adjacent areas;</p> <p>(b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;</p> <p>(c) Status of access leading to work areas and any anchorages; and,</p> <p>(d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.</p>	<p>JSSS Section 2.5 [<i>Fall Prevention</i>] shall be read in conjunction with respective other parts of JSSS.</p> <p>NK modified as comment.</p> <p>2.5.2. Height Thresholds</p> <p>The threshold for fall protection in construction work is 2 m. The Contractor must provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3. Facilities for Ascending and Descending</p> <p>When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor's Personnel to safely access and descend from such work levels.</p> <p>2.5.4. Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p> <p>(2) Accordingly, and in advance of the commencement of any parts of the Works, the Contractor shall carry out such <u>further risk pre-assessment</u> including checking the following and shall record the results:</p> <p>JC: 意味が分からない。普通は hazard identification では？ Cannot know the meaning (further risk pre-assessment). It may be hazard identification usually.</p> <p>NK: 2.5.4 means that risk assessment shall be made in two stages, namely in making the Safety Plan and secondly prior to the actual start of the Work. The 82) is modified as the right (for MD's review and editing.)</p> <p>(a) Work areas and the conditions of adjacent areas;</p> <p>(b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;</p> <p>JC: 日本語版では対象外にしましたので、入れることになった理由を教えてください。 May we know why the net is specified though we determined net would not be specified in the Japanese JSSS.</p> <p>MM: 2.5.4 Risk Assessment (2) (b) Safety nets</p> <p>It will be left as it is, as it is in the clause of risk assessment as discussed in last September.</p> <p>NK: 9月27日の会議で安全ネットを規定することを記録しています。 The MM of 9/27 mentions to add safety net as follows: 3. Preparation Method of Chapters for Technical Requirements in English (1) Preparation of JSSS</p>	<p>2.5.2. Height Thresholds</p> <p>The threshold for fall protection in construction work is 2m. The Contractor must provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3. Facilities for Ascending and Descending</p> <p>When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor's Personnel to safely access and descend from such work levels.</p> <p>2.5.4. Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p> <p>(2) Accordingly, and in In advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk pre assessment including checking the following and shall record the results:</p> <p>(a) Work areas and the conditions of adjacent areas;</p> <p>(b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;</p>
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	<p>2.5.5. Handrails</p> <p>(1) Handrails shall be minimum 85 cm high, complete with top-rails and mid-rails designed to withstand 70 kg. of horizontal force, top-rails to withstand 90 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>(2) Mid-rails shall be placed at a height of 35 – 50 cm.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:</p> <p>(a) Displaying appropriate warning signs;</p> <p>(b) Assigning a Spotter to direct non-essential Contractor's Personnel away;</p>	<p>NK explained ... 2.5 Fall Prevention, ... The editing process has <u>adding missing items</u>, to catch as many potential requirements as possible (such as <u>safety nets for example</u>), ...</p> <p>(c) Status of access leading to work areas and any anchorages; and,</p> <p>(d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.</p> <p>2.5.5. Handrails</p> <p>JC: 墜落の危険がある場所には手すりを付ける、という記述をまず入れてください。Please specify at first "handrails shall be provided at places where there is risk of fall".</p> <p>NK: To insert the sentence as follows: The Contractor shall provide handrails at places where there is risk of fall.</p> <p>JICA: Please specify (1) height of handrail, (2) force. May we know the source of force.</p> <p>NK: To modify (1) for height, (2) for force. The source of force is OSHA subpart L 1926.451 (g) Fall Protection (4) (ix). (ix) Mid-rails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along the mid-rail or other member of at least 75 pounds (333 n) for guardrail systems with a minimum 100 pound top-rail capacity, and at least <u>150 pounds (666 n=約 68kg for guardrail systems with a minimum 200 pound (約 90kg) top-rail capacity.</u></p> <p>(1) Handrails shall be minimum 85 cm high, complete with top-rails and mid-rails designed to withstand 70 kg. of horizontal force, top-rails to withstand 90 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>JC: (1)を高さ、(2)を荷重に関する規定に揃えてください。荷重に関する出典はなんでしょう？</p> <p>(2) Mid-rails shall be placed at a height of 35 – 50 cm.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:</p> <p>(a) Displaying appropriate warning signs;</p> <p>(b) Assigning a Spotter to direct non-essential Contractor's Personnel away;</p>	<p>(c) Status of access leading to work areas and any anchorages; and,</p> <p>(d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.</p> <p>2.5.5 Handrails</p> <p>The Contractor shall provide handrails at places where there is risk of fall.</p> <p>(1) Handrails shall be complete with top-rails of minimum 85 cm high and mid-rails placed at a height of 35 - 50 cm.</p> <p>(2) The top-rail shall be designed to withstand 90 kg. of horizontal force and mid-rails 70 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:</p> <p>(a) Displaying appropriate warning signs;</p> <p>(b) Assigning a Spotter to direct non-essential Contractor's Personnel away;</p>
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- (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets.
- (d) Prohibiting entry to the working area of any non-authorised Contractor's Personnel
- (e) Handrails shall be restored immediately after the necessity for removal has ended.

2.5.6. Toeboards

- (1) Toeboards shall be provided to all handrails to prevent risk of Falling Objects.
- (2) Toeboards shall be minimum 10cm high from top edge to the level of the working platform, runway or ramp.
- (3) Where material, is piled to such height that a 10cm toeboard does not provide protection, panelling from floor to mid-rail, or to top-rail shall be provided.

2.5.7. Temporary Walkways and Passageways

- (1) Installation of walkways and passageways
 The Contractor shall provide safe routes leading to, within and around working areas that ensure safety of passage for Contractor's Personnel and these shall be effectively maintained at all times.
 The Contractor shall display signs clearly indicating the use, extent and directions so that the Contractor's Personnel will adhere to these routes and other activities will be prevented from accessing these routes.

- (2) Handrails

- (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets.
- (d) Prohibiting entry to the working area of any non-authorised Contractor's Personnel
- (e) Handrails shall be restored immediately after the necessity for removal has ended.

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2.5.7. Temporary Walkways and Passageways

- (1) Installation of walkways and passageways
 JC: 定義上の違いは？ safe routes の単なる言い換えか？
 What is difference of these in definition? Are these only paraphrases of safe routes?
 NK: The definition is as follows following OSHA.
 § 1926.851 Stairs, passageways, and ladders.
 (a) Only those stairways, passageways, and ladders, designated as means of access to the structure of a building, shall be used.
 § 1926.450 Scope, application and definitions applicable to this subpart.
Walkway means a portion of a scaffold platform used only for access and not as a work level.
 NK: NK will ask MD if it is proper to use walkways in scaffolds and passageways in the Site in general, footpath outside the Site as mentioned in 2.6.2(12).
 The Contractor shall provide safe routes leading to, within and around working areas that ensure safety of passage for Contractor's Personnel and these shall be effectively maintained at all times.
 The Contractor shall display signs clearly indicating the use, extent and directions so that the Contractor's Personnel will adhere to these routes and other activities will be prevented from accessing these routes.

- (2) Handrails

- (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets.
- (d) Prohibiting entry to the working area of any non-authorised Contractor's Personnel
- (e) Handrails shall be restored immediately after the necessity for removal has ended.

2.5.6. Toeboards

- (1) Toeboards shall be provided to all handrails to prevent risk of Falling Objects.
- (2) Toeboards shall be minimum 10cm high from top edge to the level of the working platform, runway or ramp.
- (3) Where material, is piled to such height that a 10cm toeboard does not provide protection, panelling from floor to mid-rail, or to top-rail shall be provided.

2.5.7. Temporary Walkways and Passageways

- (1) Installation of walkways and passageways

The Contractor shall provide safe routes leading to, within and around working areas that ensure safety of passage for Contractor's Personnel and these shall be effectively maintained at all times.
 The Contractor shall display signs clearly indicating the use, extent and directions so that the Contractor's Personnel will adhere to these routes and other activities will be prevented from accessing these routes.

- (2) Handrails

<p>2.5.4 作業床端、開口部からの墜落防止措置</p> <p>請負者は、高さが 2m 以上の作業床端、開口部からの墜落防止のために次の措置を講じなければならない。 →E2.5.9(1)に規定済み</p> <p>(1) 作業床の端、開口部等には、必要な強度を持つ囲い、手すり、覆い等(以下「囲い等」という)を設置すること。→E2.5.9(2)(3)に規定済み</p> <p>(2) 囲い等を設けることが著しく困難なとき又は作業の必要上臨時に囲い等を取りはずすときは作業員に墜落制止用器具を使用させること。→E2.5.9(4)に規定済み</p> <p>(3) 床上の開口部の覆い上には、原則として材料等を置かないこととし、その旨を表示すること。→記述なし。→(NKの方針: 下記(4)(5)も含めて解釈により他項目との重複の可能性はあるが、具体的な留意点として加えるべきと考える。</p> <p>(4) 囲い等をやむを得ず取りはずして作業をする場合には、当該場所への関係作業員以外の立入禁止措置(標識の設置、作業員への周知)及び監視員の配置を行うこと。また、取りはずした囲い等は、作業終了後直ちに復旧すること。→記述なし。(上記(3)参照)</p> <p>(5) 作業床の端、開口部等の囲い等の点検を作業開始前に必ず行い、不具合のある施設の使用禁止措置を行うと同時に修理や復旧の措置を迅速に行うこと。→記述なし。(上記(3)参照)</p>	<p>At any point where there may be a risk of Contractor's Personnel falling from temporary passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].</p> <p>Alternatively, the Contractor shall provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8. Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms can be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.6 (3).</p> <p>2.5.9. Preventing Falls from the Ends and Openings of Working Platforms</p> <p>(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.</p> <p>(2) The Contractor shall provide handrails to all ends, edges and openings.</p> <p>(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.</p> <p>(4) If for any reason it is not possible to enclose the areas, or provide covers or when same is ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.6 (3).</p>	<p>At any point where there may be a risk of Contractor's Personnel falling from temporary passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].</p> <p>Alternatively, the Contractor shall may provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8. Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms can be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.7(3).</p> <p>2.5.9. Preventing Falls from the Ends and Openings of Working Platforms</p> <p>(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.</p> <p>(2) The Contractor shall provide handrails to all ends, edges and openings.</p> <p>(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.</p> <p>(4) If for any reason it is not possible to enclose the areas, or provide covers or when same is ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 [Handrails].</p> <p>JC: 個人的にはニュアンスがわからない。ずっとあるいは一時的になら or が入るのでは? Personally, cannot understand the nuance. If this is for long time or temporary, it needs "or" between theses.</p> <p>NK: この"ever"は「もしも」「仮に」「というようなことがあったら」とかの意を表していると思います。NK assume this</p>	<p>At any point where there may be a risk of Contractor's Personnel falling from temporary walkways and passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].</p> <p>Alternatively, the Contractor shall provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8. Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms can be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 5(4).</p> <p>2.5.9. Preventing Falls from the Ends and Openings of Working Platforms</p> <p>(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.</p> <p>(2) The Contractor shall provide handrails to all ends, edges and openings.</p> <p>(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.</p> <p>(4) If for any reason it is not possible to enclose the areas, or provide covers or when same is ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 [Handrails].</p>
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<p>(6) 開口部の覆いは、覆い上を通行する可能性のある作業員などの通過物に対して2倍以上の耐力を確保すること。→E2.5.9(3)に規定済み</p> <p>2.5.5 掘削作業における墜落防止措置</p> <p>(1) 請負者は、墜落のおそれのある人力のり面整形作業等では、親綱を設置し、墜落制止用器具を使用させなければならない。その際、親綱の上方のり面との接触による土砂等の崩壊等が生じないように配慮しなければならない。→E2.5.10(1)(2)に規定済み</p> <p>(2) 請負者は、斜面を昇降する必要がある場合には、安全な昇降設備を設けなければならない。施工上、当該措置が講じ難い場合は、親綱を設置し墜落制止用器具を使用させること。この場合、親綱の固定部は、ゆるみ等が生じないよう十分安全性について確認しなければならない。→E2.5.10(3)に規定済み</p> <p>(3) 請負者は、のり肩を通路とする際には、転落防止柵等を設置しなければならない。→E2.5.10(4)に規定済み</p> <p>(4) 請負者は、土留・支保工内の掘削には、最低2箇所通路を設置することとし、切梁、腹起し等の土留・支保工部材上の通行を禁止しなければならない。→規定なし。→追記する。E2.5.10(5)にトレンチ掘削の上を渡る場合の規定あり。</p>	<p>2.5.10. Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <ol style="list-style-type: none"> (1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access. (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces. (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached. (4) Installing handrails where the slope shoulder is used as a passageway. (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system. 	<p>"ever" means "if", "in case". NK propose to modify as right.</p> <p>2.5.10. Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <ol style="list-style-type: none"> (1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access. (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces. (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached. (4) Installing handrails where the slope shoulder is used as a passageway. (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system. <p>JC: 昇降設備の基準に同じ? Is this (30m) same as specification for elevating access facility?</p> <p>NK: This is for crossing over the trench excavation which is not specified in Japanese version.</p> <p>NK: Access and egress in trench excavation and other pit excavation will be specified in (6) & (7) as Japanese 2.5.5 (4) and OSHA below.</p> <p>§ 1926.651 Specific excavation requirements. (c) Access and egress</p> <p>(2) Means of egress from trench excavations. A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet (1.22 m) or more in depth so as to require <u>no more than 25 feet (7.62 m) of lateral travel for employees.</u></p>	<p>2.5.10. Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <ol style="list-style-type: none"> (1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access. (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces. (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached. (4) Installing handrails where the slope shoulder is used as a passageway. (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system. <p>(6) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in trench excavations that are 1.2 m or more in depth so as to require no more than 7.5 m of lateral travel for Contractor's Personnel.</p> <p>(7) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in deep excavations with/without shoring system and prohibiting all Contractor's Personnel from crossing on the shoring system.</p>
<p>2.5.6 ロープ高所作業における墜落防止措置</p> <p>請負者は、高さが2m以上の箇所、作業床を設けることが困難な箇所においてロープ高所作業を行う場合には、墜落防止のために下記の措置を講じなければならない。→E2.5.11(1)に規定済み</p>	<p>2.5.11. Measures for Preventing Falls during Rope Access Work</p> <ol style="list-style-type: none"> (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example: 	<p>2.5.11. Measures for Preventing Falls during Rope Access Work</p> <ol style="list-style-type: none"> (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example: 	<p>2.5.11. Measures for Preventing Falls during Rope Access Work</p> <ol style="list-style-type: none"> (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example:

<p>(1) 墜落防止のための措置→E2.5.11(1)に規定済み</p> <p>(a) 身体保持器具を取り付けた親綱以外に、墜落制止用器具を取り付けるための命綱を設置すること。→E2.5.11(1)(a)に規定済み</p> <p>(b) 親綱、命綱、これらを支持物に繋結するための繋結具、身体保持器具及びこれを親綱に取り付けるための接続器具(以下これらを「親綱等」という。)については、十分な強度を有するものであって、著しい損傷、摩耗、変形又は腐食がないものを使用すること。→E2.5.11(1)(b)に規定済み</p> <p>(2) 親綱・命綱・身体保持器具→E2.5.11(2)に規定済み</p> <p>(a) 親綱と命綱は、作業箇所の上方のそれぞれ異なる堅固な支持物に、外れないように確実に繋結すること。→E2.5.11(2)(a)に規定済み</p> <p>(b) 親綱と命綱は、ロープ高所作業に従事する作業員が安全に昇降するため十分な長さとする。→E2.5.11(2)(b)に規定済み</p> <p>(c) 突起物などで親綱や命綱が切断するおそれのある箇所では、覆いを設けるなど切断を防止するための措置をとること。→E2.5.11(2)(c)に規定済み</p> <p>(d) 親綱は異なる2つ以上の強固な支持物に繋結すること。→E2.5.11(2)(d)に規定済み</p> <p>(e) 身体保持器具は接続器具を用いて確実に取り付けること。なお接続器具は使用する親綱に適合したものをを使用すること。→E2.5.11(2)(e)に規定済み</p> <p>(3) 作業の手続き</p> <p>(a) 作業開始前の調査 請負者は、作業を行う箇所について、あらかじめ、次の項目を調査しその結果を記録すること。</p> <p>(i) 作業箇所とその下方の状況→規定なし。(英文案では、(b)の作業計画書・安全衛生詳細計画書の内容に含むべきとしていて考えられる。→(NK)の方針:英文案の構成のままとする。)</p>	<p>(a) Installing back-up safety lifeline (lifeline) attached to the PFRS in addition to the working line to which the harness is attached; and</p> <p>(b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.</p> <p>(2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:</p> <p>(a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;</p> <p>(b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;</p> <p>(c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) That the working line is anchored to two or more independent strong supports; and</p> <p>(e) The PFAS is securely attached to the harness and the connecting devices are compatible with the working line and lifeline used.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor's Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p>	<p>(a) Installing back-up safety lifeline (lifeline) attached to the PFRS in addition to the working line to which the harness is attached; and</p> <p>JC: 括弧書きの意味が不明です。The meaning of phrase in parentheses is not clear. NK: It is duplicated, so it is deleted. The working line and lifeline only are specified as right.</p> <p>JC: ここ、日本は PFAS 間違っていないですか。It is PFAS in Japan. Is it correct? NK: (a) is revised as right.</p> <p>(b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.</p> <p>(2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:</p> <p>(a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;</p> <p>(b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;</p> <p>(c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) The working line is anchored to two or more independent strong supports; and</p> <p>(e) The PFAS is securely attached to the harness and the connecting devices are compatible with the working line and lifeline used.</p> <p>JC: 上がミス? Is the (a) above incorrect. NK: (e) is correct.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor's Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p>	<p>(a) Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; and</p> <p>(b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.</p> <p>(2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:</p> <p>(a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;</p> <p>(b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;</p> <p>(c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) The working line is anchored to two or more independent strong supports; and</p> <p>(e) The PFAS is securely attached to the harness and the connecting devices are compatible with the working line and lifeline used.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor's Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p>
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<p>(ii) 親綱と命綱を緊結するためのそれぞれの支持物の位置、状態、それらの周囲の状況→E2.5.11(3)(a)に規定済み</p> <p>(iii) 作業箇所と支持物に通じる通路の状況→規定なし。→(NKの方針:上記(i)と同様とする。)</p> <p>(iv) 親綱又は命綱の切断のおそれのある箇所の有無並びにその位置及びその状態→E2.5.11(3)(d)に規定済み</p> <p>(b) 作業計画書及び安全衛生詳細計画書</p> <p>請負者は、ロープ高所作業を行う場合には、前項の調査を踏まえ、同作業に関する作業計画書及び安全衛生詳細計画書を作成し、同計画書に記載された下記事項について作業員へ周知すること。→E2.5.11(3)に規定済み</p> <p>(i) 作業の方法及び順序→E2.5.11(5)に規定済み。(但し、Method Statementで周知すべき内容として)</p> <p>(ii) 作業に従事する作業員の人数→E2.5.11(5)に規定済み。(i)と同様)</p> <p>(iii) 親綱及び命綱を緊結するためのそれぞれの支持物の位置→E2.5.10(3)(a)に規定済み</p> <p>(iv) 使用する親綱等の種類及び強度→E2.5.11(3)(b)に規定済み</p> <p>(v) 使用する親綱及び命綱の長さ→E2.5.11(3)(c)に規定済み</p> <p>(vi) 切断のおそれのある箇所及び切断防止措置→E2.5.11(3)(d)に規定済み</p> <p>(vii) 親綱及び命綱を支持物に緊結する作業に従事する作業員の墜落による危険を防止するための措置→E2.5.11(3)(e)に規定済み</p> <p>(viii) 物体の落下による作業員の危険を防止するための措置→E2.5.11(4)(a)に規定済み</p> <p>(ix) 労働災害が発生した場合の応急の措置→E2.5.11(4)(b)に規定済み</p> <p>(c) 請負者は、ロープ高所作業を行うときは、当該作業を指揮する作業主任を任命し、その者に前項の作業計画に基づき作業の指揮を行わせるとともに、次の事項を行わせること。→E2.5.11(5)に規定済み</p> <p>(i) 作業の開始前に作業計画書及び安全衛生詳細計画書の内容を作業員に対して周知すること。→E2.5.11(5)(a)に規定済み</p> <p>(ii) 作業の開始前に当日使用する器具を点検し、異常がある場合は直ちに補修又は取り替えること。→E2.5.11(5)(b)に規定済み</p> <p>(iii) 親綱・命綱、墜落制止用器具及び保護帽についての措置が実施された後、作業員に作業を開始させること。→E2.5.11(5)(c)に規定済み</p>	<p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chaffed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor's Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide:</p> <p>(a) Measures to prevent any danger to Contractor's Personnel from falling objects; and</p> <p>(b) First-aid and emergency medical measures in the event of occupational accidents.</p> <p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and direct the work based on the Safety Plan and perform the following duties:</p> <p>(a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;</p> <p>(b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;</p> <p>(c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFAS and PPE,</p> <p>(d) Ensure Contractor's Personnel use PFAS correctly, and, have them fix the PFAS to the life lines, and,</p> <p>(e) Appoint only Contractor's Personnel who are appropriately qualified, skilled and experienced in this type of work and provide additional as the Contractor considers necessary for this purpose.</p>	<p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chaffed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor's Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide:</p> <p>(a) Measures to prevent any danger to Contractor's Personnel from falling objects; and</p> <p>(b) First-aid and emergency medical measures in the event of occupational accidents.</p> <p>IC: (b)は全ての作業に共通する話であり、総則で全体をカバーする形で規定しているため削除。The clause (b) is common to all works. This is mentioned in Chapter 1 to cover the whole. Delete.</p> <p>NK: Deleted.</p> <p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and direct the work based on the Safety Plan and perform the following duties:</p> <p>(a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;</p> <p>(b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;</p> <p>(c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFAS and PPE,</p> <p>(d) Ensure Contractor's Personnel use PFAS correctly, and, have them fix the PFAS to the life lines, and,</p> <p>(e) Appoint only Contractor's Personnel who are appropriately qualified, skilled and experienced in this type of work and provide additional as the Contractor considers necessary for this purpose.</p> <p>IC: (e) qualified, skilled and experienced な要員を配置するのは大前提であり不要。It is a premise to place "qualified, skilled and experienced personnel". Thus, deleted.</p> <p>NK: Deleted.</p>	<p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chaffed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor's Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide measures including providing Contractor's Personnel PPE to prevent any danger to Contractor's Personnel from falling objects.</p> <p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and direct the work based on the Safety Plan and perform the following duties:</p> <p>(a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;</p> <p>(b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;</p> <p>(c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFRS, PFAS and PPE; and</p> <p>(d) Ensure Contractor's Personnel use PFRS, PFAS correctly, and, have them fix the PFAS to the life lines.</p>
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<p>(iv) 作業に従事する作業員に墜落制止用器具を使用させること。使用する墜落制止用器具は命綱に取り付けさせること。→E2.5.11(5)(d)に規定済み</p> <p>(v) 物体の飛来・落下による事故防止のため、作業員に保護帽を着用させること。→E2.5.11(4)に規定済み</p> <p>(d) ロープ高所作業に従事する作業員(補助員は除く)は総則で規定の特別教育修了者を配置すること。→E2.5.11(5)(e)に規定済み</p> <p>2.5.7 作業員に対する措置</p> <p>請負者は、墜落防止のために作業員に対する下記の措置を講じなければならない。→E2.5.12に規定済み</p> <p>(1) 新規に入場した作業員に対しては、当該現場の墜落のおそれのある箇所及び作業について、作業の開始前に安全教育を行うこと。→E2.5.12(1)に規定済み</p> <p>(2) 作業開始前に、墜落のおそれのある箇所の説明を行うこと。→E2.5.12(1)に規定済み(含まれる)</p> <p>(3) 墜落防止設備及び囲い等の無断取りはずしの禁止について教育し、監督指導すること。→E2.5.12(2)に規定済み</p> <p>(4) 墜落制止用器具を含む保護具の保管管理について指導すること。→E2.5.12(3)に規定済み</p> <p>(5) 高所作業に従事する作業員については、年齢、体力等に配慮し、特に健康状態を確認して配置すること。→E2.5.12(4)に規定済み</p> <p>(6) 高所の作業においては、未熟練者、高齢者の配置を避けること。→E2.5.12(4)に規定済み</p> <p>(7) 高さ2m以上の箇所で行なう場合において、強風、大雨、大雪等の悪天候のため、当該作業の実施について危険が予想されるときは、作業を中止すること。→E2.5.12(5)に規定済み</p> <p>2.5.8 墜落防止に関する保護具</p> <p>請負者は、作業員に墜落制止用器具を使用させる場合、次を遵守しなければならない。</p> <p>(1) 墜落制止用器具は、フルハーネス型を原則とする。ただし、墜落時に着用者が地面に到達するおそれのある場合(フルハーネス型を使用した場合の自由落下距離、ショックアブソーバの伸び及び安全離隔距離(1m)の合計長さが作業時の高さを超える場合)、胴ベルト型の使用を認める。→E2.5.13(1)(2)に規定済み</p> <p>(2) 墜落制止用器具は、当該墜落制止用器具の着用者の体重及びその装備品の質量の合計に耐えるものでなければならない。→E2.5.13(3)に規定済み</p> <p>(3) ショックアブソーバについては、装着者の作業状態</p>	<p>2.5.12. Further Measures for Contractor's Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including for example taking the following measures before any work commences:</p> <p>(1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.</p> <p>(2) Prohibit the unauthorized removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.</p> <p>(3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PPE, PFRS and PFAS.</p> <p>(4) For Contractor's Personnel to be engaged in rope access work, check their qualifications, experience, age, physical strength, and health conditions and certify whether they are fit to carry out rope access work.</p> <p>(5) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.</p> <p>2.5.13. Personal Protective Equipment for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:</p>	<p>2.5.12. Further Measures for Contractor's Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including for example taking the following measures before any work commences:</p> <p>(1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.</p> <p>(2) Prohibit the unauthorized removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.</p> <p>(3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PPE, PFRS and PFAS.</p> <p>(4) For Contractor's Personnel to be engaged in rope access work, check their qualifications, experience, age, physical strength, and health conditions and certify whether they are fit to carry out rope access work.</p> <p>JC: (4) これも条件を満たす要員を配置するのが大前提なので不要。By the same reason as above, deleted.</p> <p>NK: Deleted.</p> <p>(5) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.</p> <p>2.5.13. Personal Protective Equipment for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:</p> <p>JC: 2.5.1(3)で、PFRSがPFASに優先するという規定があるので、PFRSを最初に論じ、その後にPFASについて規定する順番で書き直し願います。</p> <p>The 2.5.1(3) specifies PFRS takes precedence over PFAS. Please change the order as PFRS at first and PFAS next.</p> <p>NK: The order is changed. (1) now states PFSR as right.</p> <p>NK: 以下のコメントと変更が良く理解できませんでした。右のように変更しました。NK cannot fully</p>	<p>2.5.12. Further Measures for Contractor's Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including for example taking the following measures before any work commences:</p> <p>(1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.</p> <p>(2) Prohibit the unauthorized removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.</p> <p>(3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PPE, PFRS and PFAS.</p> <p>(4) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.</p> <p>2.5.13. Personal Protective Equipment for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:</p>
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<p>(コネクタの取付設備の高さ、ランヤードの長さ等)から想定される自由落下距離に応じた、適切な仕様・種別のものを選定すること。→E2.5.13(4)に規定済み</p> <p>(4) 墜落制止用器具は、見やすい箇所に当該墜落制止用器具の種類、製造者名及び製造年月が表示されているものでなければならない。→E2.5.13(5)に規定済み</p> <p>(5) 上記以外の保護具及び器具</p> <p>上記規定にかかわらず墜落防止に関する保護具及び器具については、作業員に次の規則に拠る保護具を使用させることも可とする。</p> <p>米国 OSHA 規則 Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems →E2.5.13(6)に規定済み</p>	<p>(1) Provide PFAS which shall be the full harness type and shall comprise of a body harness, an anchorage, connectors, lanyard, deceleration device, lifeline, or suitable combination of these, if there is any risk of the Contractor's Personnel hitting the ground if they fall (that is, where the combined length of free fall, plus extension of shock absorber, plus safe separation distance (1 m), when full harness type is used, exceeds the working height),</p> <p>The use of a Safety Belt for PFAS is prohibited. Wherever PFAS is provided for use, the Contractor shall ensure that it is used.</p> <p>PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself.</p> <p>For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of installed connector equipment, length of lanyard, etc.).</p> <p>(2) Provide PFRS which shall be the same as above but designed to restrict the movement of workers and prevent them from reaching the edge of any working area and therefore eliminating the risk of a fall. PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p>	<p>understand JICA's comment and revision, however NK revised as right.</p> <p>NK: フルハーネス型の落下距離は、次の参考の内、OSHA にもとづき規定しました。 NK prepared the total fall clearance assistance of PFAS referring to OSHA. 墜落制止用器具の安全な使用に関するガイドラン (平成 30 年 6 月 22 日付け基発 0622 第2号) https://www.mhlw.go.jp/file/04-Houdouhappyou-11302000-Roudoukijunkyokuanzeniseibu-Anzenka/0000212917.pdf OSHA Technical Manual General Information Section V: Chapter 4 Fall Protection in Construction https://www.osha.gov/dts/osta/otm/otm_v/otm_v_4.html</p> <p>(1) (JICA revised version from NK (1)) Provide PFAS which shall be the full harness type and shall comprise of a body harness, an anchorage, connectors, lanyard, deceleration device, lifeline, or suitable combination of these, if there is any risk of the Contractor's Personnel hitting the ground if they fall (that is, where the combined length of free fall, plus extension of shock absorber, plus safe separation distance (1 m), when full harness type is used, exceeds the working height),</p> <p>JC: この部分の内容と、この後(that is 以下)の内容が矛盾しています。The contents of the first three lines of this clause is inconsistent with the following phrase in parentheses.</p> <p>NK: The sentence is reconstructed as right.</p> <p>The use of a Safety Belt for PFAS is prohibited. Wherever PFAS is provided for use, the Contractor shall ensure that it is properly used.</p> <p>JC: 意味不明 The meaning of this phrase is unknown</p> <p>PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself.</p> <p>For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of installed connector equipment, length of lanyard, etc.).</p> <p>(2) (JICA revised version from NK (2)) Provide PFRS which shall be the same as above but designed to restrict the movement of workers and prevent them from reaching the edge of any working area and therefore eliminating the risk of a fall. PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary</p>	<p>(1) The Contractor shall provide PFRS as follows:</p> <p>(a) PFRS shall be the same as PFAS specified below but designed to restrict the movement of workers and prevent them from reaching the edge of any working area and therefore eliminating the risk of a fall.</p> <p>(b) PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p> <p>(2) The Contractor shall provide PFAS as follows:</p> <p>(a) The PFAS shall be the full harness type and shall comprise of a body harness, connectors, lanyard, deceleration device, lifeline, anchorage, or suitable combination of these.</p> <p>(b) The use of a Safety Belt for PFAS is prohibited except the case that if there is any risk of the Contractor's Personnel hitting the lower surface when the full harness type is used, the total fall clearance distance calculated as below is less than the distance between the point at which a worker would be anchored and any lower surface. The total fall clearance distance for PFAS with a shock-absorbing lanyard is calculated as the total of free fall distance, deceleration distance, D-ring shift, back D-ring height, and safety factor. (Refer to OSHA Technical Manual General Information, Section V: Chapter 4 Fall Protection in Construction, III. Measurements for Assessing Fall Hazards and Controls, A. Total Fall Clearance Distance for PFAS.)</p> <p>(c) PFAS shall withstand the total force exerted on the system by the Contractor's Personnel</p>
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	<p>Wherever PFRS is provided for use, the Contractor shall ensure that it is used.</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Contractor's Personnel may also use protective equipment in accordance with the following standard for protective equipment and equipment concerning fall prevention.</p> <p>Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.</p> <p>(5) Inspection of any safety equipment</p> <p>Before starting work for example using PFRS or PFAS, the systems and anchorages to which the systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.14. Portable Ladders and Stepladders</p> <p>For further requirements, refer to JSSS 7.4 Walkways, Ladders and Stepladders</p> <p>2.5.15. Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p> <p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p>	<p>equipment, typically including a lanyard, lifeline and other devices.</p> <p>Wherever PFRS is provided for use, the Contractor shall ensure that it is used.</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Contractor's Personnel may also use protective equipment in accordance with the following standard for protective equipment and equipment concerning fall prevention.</p> <p>Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.</p> <p>JC: 削除することで問題ないと考えますが、削除した意図を確認したく。Deletion of this clause is agreeable. Please explain the reason of deletion.</p> <p>NK: NK is not deleted but JICA did. The Subpart M is specified for the Contractor to refer to in 2.5.1 (2), so the above deletion does not affect to JSSS.</p> <p>(5) Inspection of any safety equipment</p> <p>Before starting work for example using PFRS or PFAS, the systems and anchorages to which the systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.13. Portable Ladders and Stepladders</p> <p>For further requirements, refer to JSSS 7.4 Walkways, Ladders and Stepladders</p> <p>2.5.14. Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p> <p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p>	<p>falling, including the weight of the system itself.</p> <p>(d) For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of anchored point, installed connector equipment, length of lanyard, etc.).</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Inspection of any safety equipment</p> <p>Before starting work for example using PFRS or PFAS, the systems and anchorages to which the systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.13. Portable Ladders and Stepladders</p> <p>For further requirements, refer to JSSS 7.4 Walkways, Ladders and Stepladders</p> <p>2.5.14. Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p> <p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p>
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	<p>When working on, accessing or crossing, floor or roof areas (including uncompleted areas under construction), or fragile roofs such as those covered with slates, tiles or other non-loadbearing coverings or where there is any risk of breaking and or falling through such areas, the Contractor shall provide continuous bearing boards for workers to walk on, with a minimum width of 60 cm or sufficiently wider to provide safe transit and where necessary to spread the bearing load on the surface and avoid penetration. The boards shall be fixed together and secured to the underlying surface by tying with ropes or clips to prevent any movement.</p> <p>Unless otherwise approved by the HSO, handrails shall be provided to both sides.</p> <p>If the underlying surface or roofing is too fragile for such measures and access is required, the Contractor shall provide an independent scaffolding boarded walkway with handrails both sides, which does not bear upon the existing roof but that is supported independently by a scaffolding structure.</p> <p>(4) Demolition or Alteration of Buildings and Structures</p> <p>When carrying out demolition or alteration of buildings or structures and where there is a risk of fall for Contractor's Personnel, the Contractor shall take the following measures:</p> <p>(a) Appoint an Operation Leader to be engaged on the work;</p> <p>(b) Safely supervise the work; and</p> <p>(c) Inform and train Contractor's Personnel engaged in the said work so that they are aware in advance of the work methods and procedures.</p> <p>2.5.16. Safety Nets</p> <p>(1) The Contractor shall provide safety nets when workplaces are more than 7.50m above the lower ground or water surface and where the use of another type of fall prevention system is impractical or has been removed.</p> <p>(2) Operations shall not be undertaken until the net is in place and has been inspected and tested.</p> <p>(3) Nets shall extend 2.50m beyond the edge of the work surface where Contractor's Personnel may be at risk and shall be installed</p>	<p>When working on, accessing or crossing, floor or roof areas (including uncompleted areas under construction), or fragile roofs such as those covered with slates, tiles or other non-loadbearing coverings or where there is any risk of breaking and or falling through such areas, the Contractor shall provide continuous bearing boards for workers to walk on, with a minimum width of 60 cm or sufficiently wider to provide safe transit and where necessary to spread the bearing load on the surface and avoid penetration. The boards shall be fixed together and secured to the underlying surface by tying with ropes or clips to prevent any movement.</p> <p>Unless otherwise approved by the HSO, handrails shall be provided to both sides.</p> <p>If the underlying surface or roofing is too fragile for such measures and access is required, the Contractor shall provide an independent scaffolding boarded walkway with handrails both sides, which does not bear upon the existing roof but that is supported independently by a scaffolding structure.</p> <p>(4) Demolition or Alteration of Buildings and Structures</p> <p>When carrying out demolition or alteration of buildings or structures and where there is a risk of fall for Contractor's Personnel, the Contractor shall take the following measures:</p> <p>(a) Appoint an Operation Leader to be engaged on the work;</p> <p>(b) Safely supervise the work; and</p> <p>(c) Inform and train Contractor's Personnel engaged in the said work so that they are aware in advance of the work methods and procedures.</p> <p>2.5.15. Safety Nets</p> <p>(1) The Contractor shall provide safety nets when workplaces are more than 7.50m above the lower ground or water surface and where the use of another type of fall prevention system is impractical or has been removed.</p> <p>(2) Operations shall not be undertaken until the net is in place and has been inspected and tested.</p> <p>(3) Nets shall extend 2.5m beyond the edge of the work surface where Contractor's Personnel may be at risk and shall be installed as close</p>	<p>When working on, accessing or crossing, floor or roof areas (including uncompleted areas under construction), or fragile roofs such as those covered with slates, tiles or other non-loadbearing coverings or where there is any risk of breaking and or falling through such areas, the Contractor shall provide continuous bearing boards for workers to walk on, with a minimum width of 60 cm or sufficiently wider to provide safe transit and where necessary to spread the bearing load on the surface and avoid penetration. The boards shall be fixed together and secured to the underlying surface by tying with ropes or clips to prevent any movement.</p> <p>Unless otherwise approved by the HSO, handrails shall be provided to both sides.</p> <p>If the underlying surface or roofing is too fragile for such measures and access is required, the Contractor shall provide an independent scaffolding boarded walkway with handrails both sides, which does not bear upon the existing roof but that is supported independently by a scaffolding structure.</p> <p>(4) Demolition or Alteration of Buildings and Structures</p> <p>When carrying out demolition or alteration of buildings or structures and where there is a risk of fall for Contractor's Personnel, the Contractor shall take the following measures:</p> <p>(a) Appoint an Operation Leader to be engaged on the work;</p> <p>(b) Safely supervise the work; and</p> <p>(c) Inform and train Contractor's Personnel engaged in the said work so that they are aware in advance of the work methods and procedures.</p> <p>2.5.15. Safety Nets</p> <p>(1) The Contractor shall provide safety nets when workplaces are more than 7.50m above the lower ground or water surface and where the use of another type of fall prevention system is impractical or has been removed.</p> <p>(2) Operations shall not be undertaken until the net is in place and has been inspected and tested.</p> <p>(3) Nets shall extend 2.5m beyond the edge of the work surface where Contractor's Personnel may be at risk and shall be installed as close</p>
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	<p>as close under the working surface as practical but in no case more than 7.50m below such work surface.</p> <p>(4) Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.</p> <p>(5) The mesh size of nets shall not exceed 15 cm by 15 cm. All new nets shall bear a label of proof test from the manufacturer that they can withstand 23,000 Nm minimum impact resistance. Edge ropes shall provide a minimum breaking strength of 2,300kg.</p> <p>(6) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.</p>	<p>under the working surface as practical but in no case more than 7.50m below such work surface.</p> <p>(4) Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.</p> <p>(5) The mesh size of nets shall not exceed 15 cm by 15 cm. All new nets shall bear a label of proof test from the manufacturer that they can withstand 23,000 Nm minimum impact resistance. Edge ropes shall provide a minimum breaking strength of 2,300kg.</p> <p>JC: どこから？安全ネットシステムを入れるのは良いけど、サイズも含めてこれら基準は緩くないか？ Where this (23,000N) come from? Not those standards below? It is good to incorporate the safety net system, however, the criteria seem not strict including for the size?</p> <p>OSHA: 6inch 17,500 foot pounds 5000 pounds 1865kg BS EN1263-1 Temporary works equipment. Safety nets. Safety requirements, test methods</p> <p>NK: Source is OSHA 1926.105 Safety nets copied below (d) The mesh size of nets shall not exceed 6 inches (15.24cm) by 6 inches. All new nets shall meet accepted performance standards of 17,500 foot-pounds (23,726Nm 2,419kgm) impact resistance as determined and certified by the manufacturers, and shall bear a label of proof test. Edge ropes shall provide a minimum breaking strength of 5,000 pounds (2,268kg).</p> <p>(6) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.</p> <p>NK: OSHA1926.105 (e) specifies term with "safety". Safety hook will be used as it is.</p>	<p>under the working surface as practical but in no case more than 7.50m below such work surface.</p> <p>(4) Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.</p> <p>(5) The mesh size of nets shall not exceed 15 cm by 15 cm. All new nets shall bear a label of proof test from the manufacturer that they can withstand 23,700 Nm minimum impact resistance. Edge ropes shall provide a minimum breaking strength of 2,270kg.</p> <p>(6) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.</p>
<p>2.6 飛来落下の防止措置</p> <p>請負者は、作業のため物体が飛来又は落下(以下、「飛来落下」という。)することにより、工事関係者又は第三者に危険が及ぶことを防止するために、以下の措置を講じなければならない。→E2.6.1に規定済み</p> <p>2.6.1 物体の落下による危険防止のための措置</p> <p>(1) 請負者は、作業場所における物体の落下による危険を防止する次の措置を講じなければならない。→E2.6.1に規定済み</p> <p>(a) 作業により物体が落下することで、下部にいる請負者の要員に危険を及ぼすおそれのある作業場所の端及び開口部にメッシュシート(Debris net)又は高さ10cm以上の幅木を設置すること。→E2.6.2(1)(2)に規定済み</p> <p>(b) 作業の性質上メッシュシート若しくは幅木を設けることが著しく困難な場合又は臨時にメッシュシート若しくは幅木を取り外す場合は、立入禁止区域を設定すること。→規定なし。</p>	<p>2.6 FALLING OBJECTS</p> <p>2.6.1. General</p> <p>The Contactor shall take all necessary measures to avoid danger and prevent damage and injury to Contractor's Personnel, Employer's Personnel and any other persons including third parties that are on or adjacent to or in the vicinity of the Site whether connected with the Works or otherwise, and who may be at risk from Falling Objects.</p> <p>In general, this shall be accomplished by:</p> <p>(1) Providing secure temporary barriers to prevent or capture falling objects, designed by the Contractor to be of sufficient strength to capture all Falling Objects without perforating and where necessary shall be of an aesthetic design to be approved the Engineer.</p>	<p>2.6 FALLING OBJECTS</p> <p>2.6.1. General</p> <p>The Contactor shall take all necessary measures to avoid danger and prevent damage and injury to Contractor's Personnel, Employer's Personnel and any other persons including third parties that are on or adjacent to or in the vicinity of the Site whether connected with the Works or otherwise, and who may be at risk from Falling Objects.</p> <p>In general, this shall be accomplished by:</p> <p>(1) Providing secure temporary barriers to prevent or capture Falling Objects, designed by the Contractor to be of sufficient strength to capture all Falling Objects without perforating and which, where necessary, shall be of an aesthetic design to be approved the Engineer.</p>	<p>2.6 FALLING OBJECTS</p> <p>2.6.1. General</p> <p>The Contactor shall take all necessary measures to avoid danger and prevent damage and injury to Contractor's Personnel, Employer's Personnel and any other persons including third parties that are on or adjacent to or in the vicinity of the Site whether connected with the Works or otherwise, and who may be at risk from Falling Objects.</p> <p>In general, this shall be accomplished by:</p> <p>(1) Providing secure temporary barriers to prevent or capture Falling Objects, designed by the Contractor to be of sufficient strength to capture all Falling Objects without perforating and which, where necessary, shall be of an aesthetic design to be approved the Engineer.</p>

<p>E2.62(3)に一般的に規定している。→(NKの方針:本項目を(3)に追記する。)</p> <p>(c) 構造物の出入口と外部足場が交差する場所の出入口上部には、物体の落下防止の防護棚を設置すること、併せて出入口には安全な通路を指定すること。→E2.6.2(4)(5)に規定済み</p> <p>(d) 物体の落下防止のためのメッシュシートの使用及び管理は次であること。→E2.6.2(11)に規定済み</p> <p>(i) メッシュシートは、網目の寸法 12mm 以下又は想定される落下物の落下防止に応じた網目の寸法で、落下物による破損が生じない強度を有する、物体の落下防止を目的とするものを使用すること。→E2.6.2(11)(a)(b)に規定済み</p> <p>(ii) メッシュシートに網目の乱れ、破損があるものは使用しないこと。→E2.6.2(11)(c)に規定済み</p> <p>(iii) 作業の都合上、メッシュシートを取りはずしたときは当該作業終了後すみやかに復元すること。→E2.6.2(11)(d)に規定済み</p> <p>(i) メッシュシートは、少なくとも毎週 1 回は点検し、破損等があった場合には直ちに補修すること。→E2.6.2(11)(e)に規定済み</p> <p>(ii) メッシュシート上に、落下物があるときは、作業前に落下物を除去すること。→E2.6.2(11)(f)に規定済み</p> <p>(2) 請負者は、作業場所が道路又は民家等に近接していて、物体の落下による危険が第三者に及ぶおそれがある場合は、次の措置を講じなければならない。→E2.6.2(12)に規定済み</p> <p>(a) 上記(1)(a)から(c)と同様の措置を講ずること。→E2.6.2(12)(a)に規定済み</p> <p>(b) 現場に近接する歩道には防護棚又は仮設屋根を設置すること。→E2.6.2(12)(a)に規定済み</p> <p>(c) 一時的に上記の措置が取れないときは、安全な通路又は迂回路を設置するとともに誘導員を配置し、通行車両及び歩行者の安全を確保すること。→E2.6.2(12)(b)に規定済み</p>	<p>(2) Providing a safe means of raising and lowering Goods, tools, waste and debris</p> <p>(3) Providing an exclusion zone prohibiting persons and traffic from entering areas where falling objects could be a risk, including providing pedestrian and traffic diversions.</p> <p>(4) Using PPE.</p> <p>(5) Provide coloured warning tape, barriers and signage warning of “DANGER FALLING OBJECTS” in addition to all other preventive measures.</p> <p>2.6.2. General Preventive Measures</p> <p>(1) All horizontal boarded areas of scaffolding shall be provided with substantial and continuous toeboards to all edges.</p> <p>(2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas.</p> <p>(3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or external walls.</p>	<p>(2) Providing a safe means of raising and lowering Goods, tools, waste and debris</p> <p>(3) Providing an exclusion zone prohibiting persons and traffic from entering areas where Falling Objects could be a risk, including providing pedestrian and traffic diversions.</p> <p>NK: The following clause mentioned in Japanese is omitted but important, so it is reinstated in (3). “Establish a prohibited entry area if it is extremely difficult to provide a mesh sheet or toe-board due to the nature of the work, or if the mesh sheet or baseboard is to be removed temporarily.”</p> <p>(4) Using PPE.</p> <p>(5) Providing coloured warning tape, barriers and signage warning of “DANGER FALLING OBJECTS” in addition to all other preventive measures.</p> <p>2.6.2. General Preventive Measures</p> <p>(1) All horizontal boarded areas of scaffolding shall be provided with a substantial and continuous toe-board to all edges.</p> <p>JC: minimum 10cm highから変更の経緯 →この変更については日本側調査団も了解のうえのものという理解でよろしいでしょうか。The history of change from “minimum 10cm high” to no mentioning height. Was this change made based on the consent of NK’s Japanese side?</p> <p>MM: The height of toeboards will be 10 cm as specified as original.</p> <p>NK: The height of 10 cm in minimum is specified in 2.5.6 (2), so not mentioned here.</p> <p>(2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas.</p> <p>(3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or external walls.</p> <p>JC: そもそもこれ何？周辺フェンスなら建築物側の壁の方ということ？ →wallがあるなら物は落ちない筈です。これは外壁部を訳したものでしょうか？non-nativeにも分かりやすい表現でお願いします。</p> <p>What is this (external wall) all about? If it is surrounding fence, it means the wall of building side? If so, any object wouldn't fall because of the wall. Is this the translation of “outer wall”? Please describe with expression that is understandable by non-native.</p> <p>NK: They mean openings of external wall without scaffolding. (3) is modified as right.</p> <p>(4) Safe passageways with substantial roof, walls and floors sides shall also be provided over entrances and exits.</p>	<p>(2) Providing a safe means of raising and lowering Goods, tools, waste and debris</p> <p>(3) Providing an exclusion zone prohibiting persons and traffic from entering areas where Falling Objects could be a risk, including providing pedestrian and traffic diversions. The exclusion zone shall include the cases that it is extremely difficult to provide mesh sheets or toe-board due to the nature of the work, or mesh sheets or baseboards are temporarily removed.</p> <p>(4) Using PPE.</p> <p>(5) Providing coloured warning tape, barriers and signage warning of “DANGER FALLING OBJECTS” in addition to all other preventive measures.</p> <p>2.6.2.General Preventive Measures</p> <p>(1) All horizontal boarded areas of scaffolding shall be provided with a substantial and continuous toe-board to all edges.</p> <p>(2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas.</p> <p>(3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or openings of external walls where there is no scaffolding.</p>
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	<p>(4) Safe passageways with substantial roof, walls and floors sides shall also be provided over entrances and exits.</p> <p>(5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways, footpaths and roads, including those on areas beyond the Site boundary.</p> <p>(6) Protective roofs and covered walkways shall be provided wherever there is a risk over working areas, walkways, footpaths and roads.</p> <p>(7) All protective structures including roofs, canopies, safety fans, projecting shelves and covered walkways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p>	<p>JC: substantial or secured? What does this (substantial) mean?</p> <p>NK: substantial has meanings of firm, stable, steadfast etc.: ex. a substantial building. It is replaced with secured as right.</p> <p>JC: 落下物には関係がないように思いますがどのような意図で入っているのでしょうか。This clause (floors sides) seems to be unrelated with falling objects. What is your intention to include this?</p> <p>NK: cannot know the meaning of floors sides now, therefore delete it tentatively.</p> <p>(5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways, footpaths and roads, including those on areas beyond the Site boundary.</p> <p>(6) Protective roofs and covered walkways shall be provided wherever there is a risk over working areas, walkways, footpaths and roads.</p> <p>(7) All protective structures including roofs, canopies, safety fans, projecting shelves and covered walkways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p> <p>JC: 出典? Where does this number come from? The source?</p> <p>NK: 検討経緯書 20190710 に次の記録があります。 安全措置一般 2.6 飛来落下の防止措置(第2案) JC: 原案 2.6.1 (4)について: 「目的に合わせた」の部分は具体的に言い換えを。 NK: 安全ネット (Safety net) の目的は、作業員の墜落防止が目的であることから、メッシュシート (SHE、OSHA に記載の Debris Sheet) を物体の落下防止に使用することで統</p>	<p>(4) Safe passageways with substantial secured roof, walls and floors sides shall also be provided over entrances and exits.</p> <p>(5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways pssageways, footpaths and roads, including those on areas beyond the Site boundary.</p> <p>(6) Protective roofs and covered walkways pssageways shall be provided wherever there is a risk over working areas, walkways pssageways, footpaths and roads.</p> <p>(7) All protective structures including roofs, canopies, safety fans, projecting shelves and covered walkways pssageways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p>
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	<p>(b) Sheet shall comply with JIS A8952, composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed</p>	<p>一して、右記のように変更する。 日本では、JIS A8952-1995 建築工事用シート Fabric sheets for construction shelters が規定されている。網目の寸法 12mm である。 (i) メッシュシートは、網目の寸法 12mm 以下又は想定される落下物の落下防止に応じた網目の寸法で、落下物による破損が生じない強度を有する、物体の落下防止を目的とするものを使用すること。 The source of 12mm is JIS A8952.</p> <p>(b) Sheet shall comply with JIS A8952, composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>JICA: JICA で調べたところ JIS 以外の規格を確認できませんでした。確認いただいたうえで JIS 以外がないのであれば、この記載は削除ください。あるようであれば or equivalent といった記載を入れるようにお願いします。</p> <p>As far as the result of investigation by JICA, no standard other than JIS can be confirmed. If there is no other standard by your study either, please delete this part. If there any, insert expression such as “or equivalent”.</p> <p>MM: 2.6.2 Debris Nets (b) “JIS A8952”</p> <p>As JIS A8952 Fabric sheets for construction shelters is in Japanese only, BS 7955:1999 Containment nets and sheets on construction works, Specification for performance and test methods will be specified.</p> <p>NK: (c) is modified as right.</p> <p>(c) Sheets that are damaged or which contain any <u>irregularity</u> shall not be used;</p> <p>JC: irregularity という言葉で正しいか、再確認をお願いします。Please re-check if the expression “irregularity” is appropriate.</p> <p>NK: The original translation was “Mesh sheets that have mesh irregularities or breakage shall not be used.”. MD accepted “irregularity”. It is left as it is.</p> <p>(d) If sheet is removed temporarily <u>to suit</u> the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>JC: 英語がおかしくありませんか。Is this English (to suit) correct?</p> <p>NK: The original translation was “due to the convenience of the work”. MD’s translation is much sophisticated and expressing the situation better. It is left as it is.</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to</p>	<p>(b) Sheet shall comply with BS 7955 or equivalent composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p>
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	<p>before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p> <p>(12) When the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside the Site boundary and where there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p>	<p>prevent any reoccurrence.</p> <p>(12) When the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside the Site boundary and where there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>JC: 上での walkway とは使い分け？ How to differently use “footpaths” and “walkway” above?</p> <p>NK: foot path は現場外の小道/歩道、walkway は足場の中の通路、passageway は現場内の通路として使用します。 Following the definition below (as explained above 2.6.2 §12), JSSS will use the terms consistently.</p> <p>footpath: way for the use of pedestrians (BS) walkway: a portion of a scaffold platform used only for access (OSHA) passageway: means of access to the structure of a building (OSHA)</p> <p>OSHA § 1926.851 Stairs, passageways, and ladders. (a) Only those stairways, passageways, and ladders, designated as means of access to the structure of a building, shall be used. § 1926.450 Scope, application and definitions applicable to this subpart. Walkway means a portion of a scaffold platform used only for access and not as a work level.</p> <p>BS ISO 6707-1:2017 3.1.3.54 footpath: way for the use of pedestrians 3.1.3.55 footway, sidewalk, US, walkway, US: portion of a road (3.1.3.1) reserved exclusively for pedestrians Note 1 to entry: In the US, there is a homograph for the term “walkway”. See 3.2.4.4. 3.2.4 Spaces associated with circulation and movement 3.2.4.1 circulation space: space (3.2.1.1) for the movement of people, goods, or vehicles 3.2.4.2 means of access, access, US, egress, US: public or private way of approach or entrance for pedestrians or vehicles 3.2.4.3 corridor hall, US, passage, US: narrow enclosed circulation space (3.2.4.1) that gives access to rooms (3.2.1.3) or other spaces (3.2.1.1) 3.2.4.4 passage, walkway, US: narrow circulation space (3.2.4.1) bounded on both sides and intended for pedestrians 3.2.4.8 walkway, catwalk, US: construction (3.3.5.6) that provides elevated lateral access for pedestrians</p> <p>JC: いらぬんじゃない？ そもそも、境界の外は広すぎて意味ない。 Is this unnecessary “along or outside the Site”? In the first place, outside of the Site is too broad thus, it is meaningless.</p> <p>NK: There is a risk that wind bring Falling Objects to not only</p>	<p>(12) When/Where (?)the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside (?)the Site boundary and where/when (?)there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>Note: To MD, please review the (12).</p>
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<p>2.6.2 作業による飛来物による危険防止のための措置</p> <p>(1) 請負者は、飛来による危険が予想されるコンクリートの破砕作業、グラインダー等を使用する研削作業においては、次の飛来防止措置を講じなければならない。→E2.6.3(1)に規定済み</p> <p>(a) 飛来物が発生する場所を必要に応じ覆うなどの飛来防止措置を講ずること。→E2.6.3(1)(a)に規定済み</p> <p>(b) 研削作業の手順、工具の破断に伴う危険防止等の措置については、本仕様書 4.1[建設機械作業の一般的留意事項]の規定に従うこと。→E2.6.3(1)(b)に規定済み</p> <p>(c) 保護帽、保護メガネ等の飛来物による危険防止の保護具を使用させること。→E2.6.3(1)(c)に規定済み</p> <p>(2) 強風時には、本仕様書 2.7.6[強風及び暴風に対する措置]に従い、資材等の飛散防止の措置をとること。→E2.6.3(2)に規定済み</p> <p>2.6.3 物体投下による危険防止のための措置</p>	<p>2.6.3. Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p> <p>(a) Enclose areas where such operations are taking place, provide protective screens or cover storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.1 [General Notes on Construction Equipment Work] for grinding work equipment condition, use of guards and procedures for preventing danger due to tool breakage etc. and,</p> <p>MD to Coordinate with JSSS 4.1 when received</p> <p>(c) Ensure that workers use appropriate PPE such as Head, Face and Eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [Measures against Strong Wind and Storms] in this Specification.</p>	<p>along but also outside the Site. Therefore “outside” will be left as it is.</p> <p>JC: {分けるなら}when と where が逆じゃないの？どうもこの辺英語の練度がすぐ目に付くぐらい。</p> <p>If dividing the cases, the order may be “when”, then “where”.</p> <p>NK: will ask MD about order.</p> <p>JC: 不要？Unnecessary?</p> <p>NK: deleted as commented.</p> <p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs or covered walkways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and place a Spotter to direct traffic and pedestrians.</p> <p>2.6.3. Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p> <p>(a) Enclose areas where such operations are taking place, provide protective screens or cover storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.1 [General Notes on Construction Equipment Work] for grinding work equipment condition, use of guards and procedures for preventing danger due to tool breakage etc. and,</p> <p>NK: Revised as right</p> <p>(c) Ensure that workers use appropriate PPE such as Head, Face and Eye protection to prevent accident or injury.</p> <p>JC: 全て小文字に変更。All shall be changed to small letters.</p> <p>NK: Revised as right</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [Measures against Strong Wind and Storms] in this Specification.</p>	<p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs or covered walkways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and place a Spotter to direct traffic and pedestrians.</p> <p>2.6.3.Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p> <p>(a) Enclose areas where such operations are taking place, and provide protective screens or cover on storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.2 [Inspection, Maintenance and Repair] for grinding work equipment condition, use of protective covers and procedures for preventing danger due to tool breakage etc. and,</p> <p>(c) Ensure that workers use appropriate PPE such as head, face and eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [Measures against Strong Wind and Storms] in this Specification.</p>
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<p>請負者は、高所からの物体投下による請負者の要員への危険を防止するために、次の措置を行わなくてはならない。→E2.6.4(1)に規定済み</p> <ol style="list-style-type: none"> (1) 高さ 3m以上の高所からの物体の投下を行わないこと。→E2.6.4(1)に規定済み (2) やむを得ず高さ 3m以上の高所から物体を投下する場合には、シュートを設けること。あわせて、立入禁止区域の設定又は監視員の配置を行うこと。→E2.6.4(2)に規定済み (3) シュートは、周囲に投下物が飛散しない構造とすること。→E2.6.4(3)に規定済み (4) シュート先端と地上との間隔は投下物が飛散しないように、シュートの長さ、勾配を考慮した設備とすること。→E2.6.4(4)に規定済み 	<p>2.6.4. Preventive Measures against Dropped Objects</p> <ol style="list-style-type: none"> (1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. Scaffolding clips), generally and in no event from heights of 3m or above. (2) Alternatively, the Contractor shall provide enclosed chutes, to allow objects to be brought down from heights of 3m or above and in addition, shall prohibit entry to the area or assign a Spotter. (3) Chutes shall be designed to prevent objects being scattered over a wide surrounding area. (4) The Contractor shall adjust the distance between the chute tip and the ground by arranging the chute length and gradient so that the objects do not scatter. 	<p>2.6.4. Preventive Measures against Dropped Dropping Objects</p> <p>JC: revised from dropped to dropping.</p> <ol style="list-style-type: none"> (1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. Scaffolding clips), generally and in no event from heights of 3m or above. (2) <u>Alternatively, the Contractor may provide enclosed chutes, to allow objects to be brought down from heights of 3m or above and in addition, shall prohibit entry to the area or assign a Spotter.</u> <p>JC: 現在の建築の世界で物を下す際には、シュートではなくクレーンで釣っておろす筈ですので、まずそれについて(2)で論じるようにお願いします。そのうえで alternative としてシュートがあるという記載をお願いします。</p> <p>At present, for bringing objects down from height, it is common to use a crane not a chute. So, describe crane first, then as an alternative way, describe in (2) that a chute can be used.</p> <p>NK: Modified as right.</p> <ol style="list-style-type: none"> (3) Chutes shall be designed to prevent objects being scattered over a wide surrounding area. (4) The Contractor shall adjust the distance between the chute tip and the ground by arranging the chute length and gradient so that the objects do not scatter. <p>JC: (3) "wide" is deleted. (4) all is deleted. NK: Deleted as commented.</p>	<p>2.6.4. Preventive Measures against Dropping Objects</p> <ol style="list-style-type: none"> (1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. scaffolding clips), generally and in no event from heights of 3m or above. (2) <u>The Contractor shall use a crane to bring objects down from height of 3m or above.</u> Alternatively, the Contractor may provide enclosed chutes to bring down objects and in addition, shall prohibit entry to the <u>chute</u> area or assign a Spotter. (3) Chutes shall be designed to prevent objects being scattered over a <u>wide</u> surrounding area.
<p>2.6.4 高所の作業場所の材料等の集積による危険防止のための措置</p> <p>請負者は、高所の作業場所において、材料、器具、工具等(以下、「材料等」という。)を集積する場合は、物体の落下による危険防止のために、次の措置を行わなくてはならない。→E2.6.5(1)に規定済み</p> <ol style="list-style-type: none"> (1) 足場、鉄骨等の物体の落下しやすい高所には物を集積しないこと。→E2.6.5(1)に規定済み (2) 作業床端、開口部等の 1m以内には、材料等を集積しないこと。→E2.6.5(2)に規定済み (3) 材料等を仮置きする場合は、材料等をロープ掛けやシート掛け等により、風、振動等による落下を防止すること。→E2.6.5(3)に規定済み (4) 飛散しやすい物を仮置きする場合にはロープ等で緊結するか、箱、袋に収納すること。→E2.6.5(4)に規定済み 	<p>2.6.5. Prevention of Accumulation of Goods at High Levels</p> <ol style="list-style-type: none"> (1) The Contractor shall prohibit the accumulation and storage of Goods at high levels particularly on scaffolding and steel platforms and in any event in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient. (2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like. (3) Goods shall be restrained by ropes or sheets to prevent them from falling or slipping. (4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging. 	<p>2.6.5. Prevention of Accumulation of Goods at High Levels Height</p> <ol style="list-style-type: none"> (1) The Contractor shall prohibit the accumulation and storage of Goods at height particularly on scaffolding and <u>steel platforms</u> and <u>in any event</u> in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient. <p>JC: 必要でしょうか? Is it ("in any event") necessary? NK: Deleted as commented. To MD, please review this deletion. NK: (1) in Japanese specifies steel frames which is under assembling, so (1) is modified as right.</p> <ol style="list-style-type: none"> (2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like. (3) <u>Goods</u> shall be restrained by ropes or sheets to prevent them from falling or slipping. 	<p>2.6.5. Prevention of Accumulation of Goods at High Levels-Height</p> <ol style="list-style-type: none"> (1) The Contractor shall prohibit the accumulation and storage of Goods at height particularly on scaffolding and steel <u>platforms frames under assembling</u> and <u>in any event (?)</u> in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient. (2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.

<p>2.6.5 上下作業時の落下物による危険防止のための措置</p> <p>請負者は、原則として上下作業は行ってはならない。但し、やむを得ず実施する場合は以下の措置を講じなければならない。→E2.6.6(1)に規定済み</p> <p>(1) 事前に上下作業の責任者間で作業の場所、内容、時間等をよく調整し、安全確保を図ること。→E2.6.6(1)に規定済み</p> <p>(2) 本仕様書 2.6.1[物体の落下による危険防止のための措置]および 2.6.4[高所の作業場所の材料等の集積による危険防止のための措置]に規定する措置に加えて、工具、材料等を落下させないように、上部で作業を行う作業員につり網、つり袋等を使用させる等の安全確保を講ずること。→E2.6.6(2)に規定済み</p> <p>(3) 危険防止措置の実施が困難な場合には、監視員を適宜配置すること。→E2.6.6(2)に規定済み</p>	<p>2.6.5 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>	<p>JC: When temporarily stored at height, 日本語に併せて仮置きする場合には、という条件を入れてください。</p> <p>Add the expression of “When temporarily stored at height,” as a condition according to Japanese draft.</p> <p>NK: Added as commented.</p> <p>(4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.5 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>JC: Contractor’s personnel ではないでしょうか? Isn’t this (his workers) “Contractor’s Personnel”?</p> <p>NK: It is the theme of this section to prohibit working above or below other workers. Thus, instead of using “Contractor’s Personnel” which includes everyone from the Contractor’s Representative, HSO to other all personnel, it is considered to be more appropriate to limit to workers. Therefore, no change is made.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>	<p>(3) When temporarily stored at height, Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.</p> <p>(4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.6 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>
<p>2019.9.5 暫定セット版 R1</p> <p>2.7 悪天候及び地震時の対策</p> <p>2.7.1 悪天候及び地震時の緊急事態対応計画 →規定なし(下記 2.7.3 参照)</p> <p>請負者は、本仕様書 1.10[緊急事態対応計画及び緊急通報体制]の規定に従い、本節 2.7.4(1)に規定する強風、暴風、大雨、大雪、雷、地震を対象にした緊急事態対応計画を、作成しなければならない。</p> <p>大雨により土石流、異常出水、斜面崩壊、落石等が見られる現場においては、緊急事態対応計画に、それ</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1. General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(2) Adverse climatic conditions and other conditions described in this Section are deemed to be foreseeable conditions within the Contractors control and they shall not be construed as constituting a cause of delay giving</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1. General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(2) <u>Adverse climatic</u> conditions and other conditions described in this Section are <u>deemed to be foreseeable</u> conditions within the Contractors control and they shall not be construed as constituting a cause of delay</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1. General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(2) Adverse climatic conditions and other conditions described in this Section are deemed to be foreseeable conditions within the Contractors control and they shall not be construed as constituting a cause of delay giving</p>

<p>らへの対応を記載しなければならない。</p> <p>2.7.2 悪天候及び地震に備えた準備と点検 →規定なし (下記 2.7.3 参照)</p> <p>請負者は、悪天候及び地震に備え、次の準備を行わなくてはならない。</p> <p>(4) 気象及び地震情報を常時テレビ、ラジオ、インターネット等で入手すること。</p> <p>(5) 電話、無線機、トランシーバー、拡声器、サイレン等、緊急時の連絡設備を常備すること。かかる連絡設備は、緊急時に使用できるよう常に点検整備しておくこと。</p> <p>(6) 停電に対応できるように非常電源設備を設置し、定期的に点検整備をしておくこと。</p> <p>(7) 悪天候及び地震時の退避場所や避難ルートについて計画し、請負者の要員に周知しておくこと。</p> <p>(8) 悪天候、地震及び津波に関する情報の伝達、及び請負者の要員のとるべき行動に関し、本仕様書 1.10 (3)に規定する訓練を行うこと。</p>	<p>any entitlement to extension of time under GCC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's obligations or entitlements under the Contract.</p> <p>2.7.2. Preventive Measures</p> <p>(1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.</p> <p>(2) During or after adverse climatic conditions, the Contractor shall:</p> <p>(a) Stop work at heights if there is any danger of falling;</p> <p>(b) Stop work if there is a possibility of that such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;</p>	<p>giving any entitlement to extension of time under GC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's <u>obligations or entitlements</u> under the Contract.</p> <p>JC: 日本語の「(悪天候が) 予見される現場」の訳として foreseeable といった表現は不適當。GC の関連条項をイメージさせる foreseeable や adverse climatic conditions といった表現は使わないようにしてください。bad weather や likely など、一般的な表現でおさめるようお願いします。(タイトルも修正願います) 全体的に修正をお願いします。</p> <p>The expression of “foreseeable” is improper as the translation of Japanese draft in which such a case that an adverse weather is predicted/expected.</p> <p>Do not use expression such as “foreseeable” or “adverse climatic conditions” that may associate with force majeure in GC.</p> <p>Please use general expression such as “bad weather” or “likely”. Modify as a whole including the title of sections, too.</p> <p>MM: 2.7. Adverse Weather Requirements 2.7.1 General</p> <p>JICA commented the adverse weather, foreseeable, etc. will not be used and replaced with other wording.</p> <p>NK explained that it is important to use such terms to avoid conflict with the extension of time and force majeure clauses of the contract. GC 8.4 (c) mentions “exceptionally adverse climatic conditions”, and “Unforeseeable” is defined.</p> <p>“adverse climatic conditions” and foreseeable have been selected to stay within the contract and NK recommend that these are not changed.</p> <p>NK: (2) is left as it is.</p> <p>2.7.2. Preventive Measures</p> <p>(1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.</p> <p>JC: 英語がおかしくないでしょうか。Is this “it” correct? NK: この it は render に必要な形式目的語としての it と考えられます。This seems an it as a formal object required for render, so it is left as it is.</p> <p>(2) During or after adverse climatic conditions, the Contractor shall:</p> <p>(a) Stop work at heights if there is any danger of falling;</p> <p>(b) Stop work if there is a possibility of that such work may be dangerous due</p>	<p>any entitlement to extension of time under GC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's obligations or entitlements under the Contract.</p> <p>2.7.2. Preventive Measures</p> <p>(1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.</p> <p>(2) During or after adverse climatic conditions, the Contractor shall:</p> <p>(d) Stop work at heights if there is any danger of falling;</p> <p>(e) Stop work if there is a possibility of that</p>
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<p>2.7.3 気象及び地震情報の収集と対応</p> <p>請負者は、気象及び地震情報の収集と気象の変化及び地震の発生に対応するため、次の措置を講じなければならない。</p> <p>(9) 本仕様書 2.7.4 (1)(a)から(d)に示す強風、暴風、大雨、大雪、もしくはそれに準ずる天候(以下、「悪天候」という。)が予想されるときは、継続的に降雨量や風速等の悪天候に係わる気象情報を確認すること。</p> <p>(10) 気象及び地震情報に基づき、必要に応じて本仕様書 2.7.4 から 2.7.9 に記載の対応をとること。また、本仕様書 1.10 (2)に規定する緊急連絡表で指定された関係者に通知すること。</p> <p>→上記 2.7.1～2.7.3 規定なし。→理由:MD 氏説明は次です。 Why is bad weather an emergency? The contractor has an obligation to be aware and allow for ALL weather conditions except “exceptionally adverse conditions and also for Force Majeure (including earthquakes, typhoons hurricanes, etc.). A safety specification should not interfere with the careful balance of FIDIC by introducing “Emergency Response” in this manner. This is not “emergency” in general it is precautions against bad weather which is foreseeable and normal.</p> <p>Please refer to added JSSS 1.23 and the definition of Landslide etc. I suggest that this Section 2.7 is now not really necessary except perhaps for the items left in this edited section.</p> <p>Contact, communications, training etc. are already in 1.2.9. (後略) 以上のように、Force Majeure との関係あるいは他節の項目との重複により削除されている。→(NK の方針: このまま規定なしとする。)</p> <p>2.7.4 作業の中止と再開</p> <p>請負者は、悪天候及び地震により事故が発生することを防ぐために、次の措置を講じなければならない。</p> <p>(11) 当該国の法律に定めがない限り、悪天候及び地震による作業の中止の基準は次を目安として定めること。→以下(a)～(e)規定なし。理由: I am really not sure of the practical or legal application of the following criteria which will vary around the world in terms of regular or exceptional adverse conditions and which may also affect the legal/contractual interpretation of extension of time and force majeure. (中略) In whose opinion for example is say 9.99 m/sec OK? What if this causes damage on the site? It can provide a basis and criteria for claim as this is effectively saying that the Contractor has no obligation to protect for lower conditions. (中略) The criteria of what is normal or exceptional will vary according to the country and the contractor should in any event price and plan for any such measures that can be anticipated in the country.→(NK の方針: このまま規定なしとする。)</p> <p>(a) 強風: 10 分間の平均風速が毎秒 10 メートル以上の風</p> <p>(d) 暴風: 瞬間風速が毎秒 30 メートルを超える風</p>	<p>(c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [Prohibition of Entry – Dangerous Work], inform the Engineer accordingly and request his instructions; and</p> <p>(d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor’s Equipment and Temporary Works only after making the necessary repairs.</p>	<p>to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;</p> <p>(c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [Prohibition of Entry – Dangerous Work], inform the Engineer accordingly and request his instructions; and</p> <p>(d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor’s Equipment and Temporary Works only after making the necessary repairs.</p>	<p>such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;</p> <p>(f) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [Prohibition of Entry – Dangerous Work], inform the Engineer accordingly and request his instructions; and</p> <p>(g) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor’s Equipment and Temporary Works only after making the necessary repairs.</p>
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<p>(e) 大雨: 1回の降雨量が50ミリメートル以上の雨</p> <p>(f) 大雪: 1回の降雪量が25センチメートル以上の雪</p> <p>(g) 地震: メルカリ震度階VI以上の地震</p> <p>(12) 天気予報等であらかじめ上記基準を超える悪天候が予想される場合は、緊急事態対応計画に従い、作業中止を含めた対応策の準備を行っておくこと。→規定なし。→理由不明。請負者が当然行うことであるから記述する必要はないと考えられる。→(NKの方針: このまま規定なしとする。)</p> <p>(13) 悪天候のときは2m以上の高所作業を中止すると共に、その旨エンジニアに通知すること。→E2.7.2(a)に記述済み</p> <p>(14) 降雨、降雪及び霧発生時の視界不良により、作業に危険を及ぼす可能性がある場合は、当該作業を中止すると共に、その旨エンジニアに通知すること。→E2.7.2(b)に記述済み</p> <p>(15) 悪天候又は地震発生後に作業を再開する前には、構造物(仮設を含む)に危険がないかを点検すること。危険箇所が発見された場合には、すみやかに危険箇所に入立禁止措置を講じ、その旨をエンジニアに通知すること。→E2.7.2(c)に記述済み</p> <p>(16) 悪天候又は地震発生後に作業を再開する前には、建設機械に危険がないかを点検すること。危険が発見された場合には、必要な修理を施した上で使用すること。→E2.7.2(d)に記述済み</p> <p>2.7.5 大雨に対する措置</p> <p>請負者は、作業現場及び周辺では、2.7.4(1)に規定する大雨に対し、次の措置を講じなければならない。→E2.7.3に記述済み</p> <p>(17) 次のような箇所は、下記(2)から(4)の対策及び立入禁止の措置を講ずること。→E2.7.3(1)に記述済み</p> <p>(b) 土砂崩れ、がけ崩れ、地すべりの発生のおそれがある箇所及び土石流の到達のおそれがある箇所→E2.7.3(1)(a)に記述済み</p> <p>(h) 資機材の流出、土砂の流出のおそれがある箇所→E2.7.3(1)(b)に記述済み</p> <p>(i) 河川の氾濫等により浸水のおそれがある箇所→E2.7.3(1)(c)に記述済み</p> <p>(18) 流出のおそれのある資機材等は、安全な場所に移動する等流出防止の措置を講じること。→E2.7.3(2)に記述済み</p> <p>(19) 大型機械の設置してある場所で、機械等の冠水又は流出、地盤のゆるみによる転倒のおそれがある場合は、適切な場所への退避又は転倒防止措置を講じること。→E2.7.3(2)に記述済み</p> <p>(20) 冠水又は流出のおそれがある仮設物は、撤去するか、水裏から仮設物内に水を呼び込み内外水位差による倒壊を防ぐか、補強するなどの措置を講じること。→E2.7.3(3)に記述済み</p>	<p>2.7.3. Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prohibit entry in accordance</p>	<p>2.7.3. Measures for Heavy Rain</p> <p>JC: 日本語版では暴風、大雨等、各現象に応じて作業中止基準が数値ともに定められていましたが、それが消えている理由を教えてください。</p> <p>There are criteria with figures for discontinuing works due to strong wind, heavy rain, etc. in the Japanese draft. Please explain the reason for eliminating those criteria.</p> <p>MM: 2.7.3 to 2.7.7 Criterion for work stoppage</p> <p>NK explained that foreseeable weather and earthquake conditions vary according to each different country which is why FIDIC do not list any criteria. Criteria for stopping works in JSSS is not recommended even as an indication.</p> <p>The Contractor shall determine their criteria for stopping work based on the climactic data at the Bidding stage and stop when the HSO feels that it is not safe to continue according to conditions at the time. The Engineer may also instruct the Contractor to stop if he feels that it is unsafe.</p> <p>NK recommend leaving as it is</p> <p>NK: 2.7.3 is left as it is.</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prohibit entry in accordance</p>	<p>2.7.3. Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p>
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<p>2.7.6 強風及び暴風に対する措置</p> <p>請負者は、作業現場及び周辺では、2.7.4(1)で規定する強風又は暴風に対し、次の措置を講じなければならない。→E2.7.4に記述済み</p> <p>(21) クレーン、杭打機等のような風圧を大きく受ける大型建設機械には、転倒、逸走防止の措置を講じること→E2.7.4(1)に記述済み</p> <p>(22) 大型建設機械は、高圧電線の大きな振れによる接触が発生しないように、電線類から十分な距離をとって退避させておくこと。→E2.7.4(2)に記述済み</p> <p>(23) 足場に対して、次の対策を行うこと。→E2.7.4(3)に記述済み</p> <p>(c) 風荷重が大きくなるメッシュシート等の撤去又はたたむこと→E2.7.4(3)(a)に記述済み</p> <p>(j) 足場等の滑動防止、壁つなぎの補強等→E2.7.4(3)(b)に記述済み</p> <p>(k) 建築物より突出している足場等の控え索や控え材等での補強→E2.7.4(3)(c)に記述済み</p> <p>(l) 足場にある資材等の固縛又は地上への移動→E2.7.4(3)(d)に記述済み</p> <p>(24) 高所作業での作業を中断すること。また、物の飛散が予想されるときは、飛散防止措置を施すこと。→E2.7.4(4)(5)に記述済み</p>	<p>with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations:</p> <p>(a) Places where Landslides could be anticipated;</p> <p>(b) Places where there is a risk of flow of material and equipment and soil runoff; and</p> <p>(c) Places where there is a risk of damage due to flash floods, lake or river flooding.</p> <p>(2) Take measures such as evacuation of Contractor’s Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.</p> <p>(3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.</p> <p>2.7.4. Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prevent capsize, collapse, overturn or movement of Contractor’s Equipment particularly cranes and pile drivers.</p> <p>(2) Always store and/or if necessary evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury.</p> <p>(3) Take the following measures for scaffolding and working platforms.</p> <p>(a) Remove or furl mesh sheets to reduce wind load;</p> <p>(b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors;</p> <p>(c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and</p> <p>(d) Securing Goods on scaffolding, or lowering them to ground level.</p> <p>(4) Discontinue work at in elevated places; and</p> <p>(5) Take measures to prevent scattering of Goods, waste and debris.</p>	<p>with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations:</p> <p>(a) Places where Landslides could be anticipated;</p> <p>(b) Places where there is a risk of flow of material and equipment and soil runoff; and</p> <p>(c) Places where there is a risk of damage due to flash floods, lake or river flooding.</p> <p>(2) Take measures such as evacuation of Contractor’s Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.</p> <p>(3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.</p> <p>2.7.4. Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prevent capsize collapse, overturn or movement of Contractor’s Equipment particularly cranes and pile drivers.</p> <p>JC: overturn で十分 “Overturn” is better here as a more understandable wording. NK: replaced as commented.</p> <p>(2) Always store and/or if necessary evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury.</p> <p>(3) Take the following measures for scaffolding and working platforms.</p> <p>(a) Remove or furl mesh sheets to reduce wind load;</p> <p>(b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors;</p> <p>(c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and</p> <p>(d) Securing Goods on scaffolding, or lowering them to ground level.</p>	<p>(1) Take measures to prohibit entry in accordance with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations:</p> <p>(a) Places where Landslides could be anticipated;</p> <p>(b) Places where there is a risk of flow of material and equipment and soil runoff; and</p> <p>(c) Places where there is a risk of damage due to flash floods, lake or river flooding.</p> <p>(2) Take measures such as evacuation of Contractor’s Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.</p> <p>(3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.</p> <p>2.7.4. Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prevent collapse, overturn or movement of Contractor’s Equipment particularly cranes and pile drivers.</p> <p>(2) Always store and/or if necessary evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury.</p> <p>(3) Take the following measures for scaffolding and working platforms.</p> <p>(a) Remove or furl mesh sheets to reduce wind load;</p> <p>(b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors;</p> <p>(c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and</p> <p>(d) Securing Goods on scaffolding, or lowering them to ground level.</p> <p>(4) Discontinue work at in elevated places; and</p>
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<p>2.7.7 雪に対する措置</p> <p>請負者は、積雪のある作業現場及び周辺では、積雪に対し次の措置を講じなければならない。→E2.7.5 に記述済み</p> <p>(25) 道路、水路等には幅員を示すためのポール、赤旗の設置等の転落防止措置を講じること。→E2.7.5(1)に記述済み</p> <p>(26) 現場内の道路、工事用栈橋、階段、スロープ、通路、作業足場等の除雪等の作業員の転倒防止措置を講じること。→E2.7.5(2)に記述済み</p> <p>(27) 付着した雪の除去など標識、掲示板等を見やすくすること。→E2.7.5(3)に記述済み</p> <p>(28) 足場や構台上に積雪あるいは着氷がある場合は、雪や氷の除去作業以外の作業を禁止すること。→E2.7.5(4)に記述済み</p> <p>2.7.8 雷に対する措置</p> <p>請負者は、雷発生時の作業に関して、次の措置を講じなければならない。</p> <p>(29) 雷検知器、ラジオ受信機等により雷雲の発生や接近の情報を入手した時は、必要に応じて2.7.3(2)で規定の設備を用いて作業員に速やかに周知すること。→E2.7.6(1)に記述済み。(ただし内容は多少変更有り。)</p> <p>(30) 雷光もしくは雷鳴が観測されたときは、直ちに作業を中止し、作業員を雷に対し安全な場所に避難させること。→E2.7.6(2)に記述済み。(ただし内容は多少変更有り。)</p> <p>(31) 雷光と雷鳴の間隔が長くなるまで作業を再開しないこと。→E2.7.6(3)に記述済み</p> <p>(32) 雷発生時の警報(作業中止、退避等)、連絡方法を定め、作業中止又は退避の場所等に関する措置を適切な所に看板等で示しておくこと。→E2.7.6(3)に記述済み</p>	<p>2.7.5. Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways.</p> <p>(2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like.</p> <p>(3) Remove snow from roofs, canopies and signs, notice boards.</p> <p>(4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal.</p> <p>2.7.6. Measures for Lightning</p> <p>(1) Lightning is a serious occupational hazard and outside work on or near tall objects, or near explosives or conductive materials have significant risks.</p> <p>(2) The Contractor shall follow the recommendations of OSHA and when thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(3) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p>	<p>(4) Discontinue work at in elevated places; and JC: Is "Suspend" more usual? NK: To avoid basis of claim in relation with GC 16 Suseptin and Termination by Contractor, discontinue is used instead of suspension.</p> <p>(5) Take measures to prevent scattering of Goods, waste and debris.</p> <p>2.7.5. Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways.</p> <p>(2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like.</p> <p>(3) Remove snow from roofs, canopies and signs, notice boards.</p> <p>(4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal.</p> <p>2.7.6. Measures for Lightning</p> <p>(1) Lightning is a serious occupational hazard and outside work on or near tall objects, or near explosives or conductive materials have significant risks. JC: 解説のため不要。This is an explanation. Unnecessary. NK: Deleted.</p> <p>(2) The Contractor shall follow the recommendations of OSHA and when thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>JC: Deleted.</p> <p>(3) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p> <p>JC: 30 分の根拠(どこかで定められているのでしょうか)を教えてください。Please clarify the basis of "30 minutes". Is it stipulated in some standard?</p>	<p>(5) Take measures to prevent scattering of Goods, waste and debris.</p> <p>2.7.5. Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways.</p> <p>(2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like.</p> <p>(3) Remove snow from roofs, canopies and signs, notice boards.</p> <p>(4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal.</p> <p>2.7.6. Measures for Lightning</p> <p>(1) When thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(2) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p>
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<p>2.7.9 地震及び津波に対する措置</p> <p>請負者は、地震発生後、津波に対して関係当局が警報を出した場合、又は津波発生が見られる場合は、決められた避難場所へ作業員を避難させなければなりません。→E2.7.7 に記述済み</p>	<p>2.7.7. Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event or earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p> <p>2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Perform a visual inspection as specified in JSSS エラー! 参照元が見つかりません。 [Inspection and Monitoring] (2) Check all measured values of any instruments. (3) Recalibrate and replace as necessary. (4) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary. (5) Keep the Engineer informed. 	<p>MM: 2.7.6 Lightning NK will mention it is OSHA recommendation.</p> <p>NK: OSHA Fact Sheet Lightning Safety When Working Outdoors https://www.osha.gov/Publications/OSHA3863.pdf mentions as follows: Seek Shelter in Buildings: remain in the shelter for at least 30 minutes after hearing the last sound of thunder.</p> <p>2.7.7. Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event or earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p> <p>2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>JC: 本節も確認する必要があると思います。日本語版の 2.7.4 (5)の内容を復活させる必要があると思います。 This clause needs to be confirmed. It is deemed to resurrect the content of 2.7.4 (5) of the Japanese version.</p> <p>NK: In 2.7.2.(c) above, there is the following provision. Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry...</p> <p>NK: As specified already, no addition is made here.</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Perform a visual inspection as specified in JSSS XXXX [Inspection and Monitoring] (2) Check all measured values of any instruments. <p>JC: どのような意味でしょうか。計器類が壊れていないか確認せよという意味でしょうか。(2)と(3)が関連しているのであれば、一緒に記載してはいいかがでしょうか。 What does this mean? It means that instruments shall be checked for its function and defect etc.? Clause (2) and (3) may be combined if they are related each other.</p> <p>NK: This means that the Contractor shall check if abnormality occurred or not on Temporary Works/structures by judging the values (data) measured by the instruments provided on/in TW. It does not mean to check damage occurrence in instruments.</p> <ol style="list-style-type: none"> (3) Recalibrate and replace as necessary. <p>NK: (3) specifies that if measured values are abnormal due to the damage or out of order of instruments, recalibrate and</p>	<p>2.7.7. Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event or earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p> <p>2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Perform a visual inspection as specified in JSSS 7.1.3 [Inspection and Monitoring] (2) Check all measured values of any instruments to ensure the safety of TW. When abnormality is found in instruments, recalibrate and/or replace them as necessary.
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		<p>replace them. (2) and (3) are modified and combined as right.</p> <p>(4) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary.</p> <p>(5) Keep the Engineer informed.</p> <p>JC: of what informed? NK: modified as right.</p>	<p>(3) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary.</p> <p>(4) Keep the Engineer informed of inspection and monitoring results of TW.</p>
<p>2.8 火災予防</p> <p>2.8.1 一般</p> <p>請負者は工事現場における火災予防については、当該国の法律に従い、法律に加え本仕様書を含む契約で別途の要求がある場合には、これに従わなければならない。→E2.8.1に記述済み。(1.22 Fire Preventionの規定に加えて下記に従うとの記述になっている。</p> <p>2.8.2 消防体制の確立</p> <p>請負者は、請負者の事務所、仮設建物、仮設備、寄宿舎、仮設工事の構造物及び工事中の本設工事の構造物等(以下、本節においては「事務所等」という。)に関し、次の消防体制を確立しなければならない。→E2.8.2に記述済み</p> <p>(33) 事務所等の消防計画を、本仕様書 1.10[緊急事態対応計画及び緊急通報体制]の緊急事態対応計画の一部として作成し、エンジニアに提出すること。同消防計画は本仕様書 2.8.3 から 2.8.6 に規定の事項を含んだものとする。→E2.8.2(1)に記述済み</p> <p>(34) 消防および火災発生時の避難に係る責任者を指名すること→E2.8.2(2)に記述済み</p> <p>(35) 消防訓練計画を作成し、消防計画に含めること。訓練を実施した場合はその記録を保管すること。→E2.8.2(3)(4)に記述済み</p> <p>2.8.3 防火及び消火のための措置</p>	<p>2.8 FIRE PREVENTION – ADDITIONAL REQUIREMENTS</p> <p>2.8.1. General</p> <p>Further to the requirements of JSSS 1.22 [<i>Fire Prevention</i>] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>2.8.2. Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required by the Bidding Documents), temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as “temporary facilities” in this Section).</p> <p>For this purpose, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prepare a fire-fighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan. (2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire. (3) Prepare a firefighting training plan as a part of the firefighting plan. (4) Carry out all training and keep records of such training in accordance with JSSS 1.17.5 [<i>Records of Education and Training</i>]. <p>2.8.3. Measures of Fire Prevention and Firefighting</p>	<p>2.8 FIRE PREVENTION—ADDITIONAL REQUIREMENTS</p> <p>2.8.1. General</p> <p>Further to the requirements of JSSS 1.22 [<i>Fire Prevention</i>] the Contractor shall provide the additional fire preventive measures described in this Section.</p> <p>JC: 1.22 Fire Prevention を削除して、本節に統合願います。 Delete 1.22 [Fire Prevention] and integrate its content into this section</p> <p>NK: 2.8.6 [Additional Service Requirement] is added, transferring from 1.22 [Fire Prevention]. The title of 2.8 and the sentence in 2.8.1 are revised accordingly.</p> <p>2.8.2. Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required by the Bidding Documents), temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as “temporary facilities” in this Section).</p> <p>JC: bidding ではなく contract. This is not “Bidding but “Contract”.</p> <p>NK: revised as right.</p> <p>For this purpose, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prepare a fire-fighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan. (2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire. (3) Prepare a firefighting training plan as a part of the firefighting plan. (4) Carry out all training and keep records of such training in accordance with JSSS 1.17.5 [<i>Records of Education and Training</i>]. <p>2.8.3. Measures of Fire Prevention and Firefighting</p>	<p>2.8 FIRE PREVENTION</p> <p>2.8.1. General</p> <p>The Contractor shall provide the fire preventive measures described in this Section.</p> <p>2.8.2. Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required in the Contract), temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as “temporary facilities” in this Section).</p> <p>For this purpose, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prepare a firefighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan. (2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire. (3) Prepare a firefighting training plan as a part of the firefighting plan. (4) Carry out all training and keep records of such training in accordance with JSSS 1.17.5 [<i>Records of Education and Training</i>]. <p>2.8.3. Measures of Fire Prevention and Firefighting</p>

<p>請負者は、事務所等の防火及び消火のために、以下の措置を講じなければならない。→E2.8.3 に記述済み</p> <p>(36) 現場内では、指定場所以外での喫煙を禁止し、喫煙場所には水を入れたバケツを設置するなど防火を徹底すること。→E2.8.3(1)に記述済み</p> <p>(37) 消火栓、消火器等の設備は、初期消火に充分なものとする。→E2.8.3(2)に記述済み</p> <p>(38) 火気を取扱う場所には、普通火災用、油火災用、電気火災用等の用途に応じた消火器等消火設備を備えること。消火器は定期的点検し、有効期間を過ぎたものは交換すること。→E2.8.3(3)(4)に記述済み</p> <p>(39) 火災発生時には消防隊が円滑に活動を行うための誘導・支援を行うこと。→E2.8.3(5)に記述済み</p> <p>2.8.4 避難のための措置</p> <p>請負者は、火災時の避難を容易にするために、次の措置を講じなければならない。→E2.8.4 に記述済み</p> <p>(40) 必要に応じ避難経路図を作成し、見やすい場所に掲示すること。→E2.8.4(1)に記述済み</p> <p>(41) 現場においては必要に応じ避難経路を標示すること。→E2.8.4(2)に記述済み</p> <p>(42) 2 階以上の建物で収容人員が 30 人以上の場合、または立坑及び地下工事の場合には複数の避難経路を設置すること。→E2.8.4(3)に記述済み</p> <p>(43) 火災発生時に避難が必要な現場内の要員に、火災発生の実を周知できる連絡方法を定めておくこと。→E2.8.4(4)に記述済み</p> <p>2.8.5 可燃物の管理</p> <p>請負者は、火災発生の危険性が高いガソリン、アセトン、トルエン等の有機溶剤、灯油、軽油、重油、クレオソート油、ギヤー油、シリンダー油等の潤滑油等の可燃物(以下、本款においては「可燃物」という。)の貯蔵及び管理については、当該国の法律に従わなければならない。また、次の措置を講じなくてはならない。→E2.8.5</p>	<p>For fire prevention and fire-fighting in the temporary facilities, the Contractor shall:</p> <ol style="list-style-type: none"> Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking areas. Provide fire extinguishers and if necessary fire hydrants with temporary water supply. Different types of fire extinguishers shall be provided according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like. Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer. Train Contractors Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available) otherwise provide the services required by JSSS 1.22 [Fire Prevention]. <p>2.8.4. Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p> <ol style="list-style-type: none"> Creating an evacuation route map if necessary and post this in easy-to-see places. Display the evacuation route as necessary at the work places. Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work. Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire. <p>2.8.5. Management of Flammable and Combustible Materials</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and</p>	<p>For fire prevention and firefighting in the temporary facilities, the Contractor shall:</p> <ol style="list-style-type: none"> Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking areas. Provide fire extinguishers and if necessary fire hydrants with temporary water supply. Different types of fire extinguishers shall be provided according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like. Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer. Train Contractor's Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available) otherwise provide the services required by JSSS 1.22 [Fire Prevention]. <p>JC: deleted.</p> <p>2.8.4. Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p> <ol style="list-style-type: none"> Creating an evacuation route map if necessary and post this in easy-to-see places. Display the evacuation route as necessary at the work places. Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work. Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire. <p>2.8.5. Management of Flammable and Combustible Materials</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and</p>	<p>For fire prevention and firefighting in the temporary facilities, the Contractor shall:</p> <ol style="list-style-type: none"> Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking areas. Provide fire extinguishers and if necessary fire hydrants with temporary water supply. Different types of fire extinguishers shall be provided according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like. Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer. Train Contractor's Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available) otherwise provide the services required by JSSS 1.22 [Fire Prevention]. <p>2.8.4. Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p> <ol style="list-style-type: none"> Creating an evacuation route map if necessary and post this in easy-to-see places. Display the evacuation route as necessary at the work places. Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work. Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire. <p>2.8.5. Management of Flammable and Combustible Materials</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures referring to comply with the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and combustible materials</p>
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<p>に記述済み</p> <p>(44) 危険物を貯蔵又は取扱う場合には、責任者を指名し、エンジニアに通知すること。</p> <p>(45) 上記責任者は、可燃物の取り扱いについて十分な経験と能力を確認できる者とする。また、当該国の法律で関連の資格が要求される場合は、当該資格を有する者でなければならない。→E2.8.5(1)に記述済み</p> <p>(46) 可燃物は直射日光を避け、通風換気の良いところに貯蔵し、貯蔵場所には、立入禁止の措置を講じ、かつ火気使用禁止の標示をすること。→E2.8.5(2)(3)に記述済み</p> <p>(47) 可燃物の取扱方法を定め、エンジニアに通知するとともに請負者の要員への周知徹底を図ること。→E2.8.5(4)に記述済み</p> <p>2.8.6 溶接・溶断による火災の予防</p> <p>溶接、溶断作業による火災の予防に関しては、本仕様書 7.9[電気溶接・ガス切断作業]の規定に従うこと。→E2.8.6に記述済み</p>	<p>combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).</p> <p>In addition, the Contractor shall:</p> <ol style="list-style-type: none"> Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer. Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight, Take measures to prohibit entry to non-authorised personnel and display signage prohibiting the use of flame. Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor’s Personnel. Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials. 	<p><u>combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards</u> for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).</p> <p>JC: OSHA の関連規定、ここで言及するのが適切か再確認願います。 Please re-confirm if referring to relevant provisions of OSHA is appropriate here or not.</p> <p>NK: Stipulation of complying with OSHA will impose the Contractor difficult obligations for storing even small amount of fuel, etc. It is considered appropriate to revise this part as right from “comply with” to “referring to”.</p> <p>In addition, the Contractor shall:</p> <ol style="list-style-type: none"> Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer. Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight, Take measures to prohibit entry to non-authorised personnel and display signage prohibiting the use of flame. Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor’s Personnel. Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials. <p>2.8.6. Additional Service Requirement (moved from JSSS 1.22)</p> <p>Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, and if so specified in the Particular Safety Specification, the Contractor shall be responsible for providing additional services</p>	<p>or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).</p> <p>In addition, the Contractor shall:</p> <ol style="list-style-type: none"> Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer. Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight, Take measures to prohibit entry to non-authorised personnel and display signage prohibiting the use of flame. Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor’s Personnel. Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials. <p>2.8.6. Additional Service Requirement</p> <p>Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, and if so specified in the Particular Safety Specification, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor’s Personnel and Employer’s</p>
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	<p>2.8.6. Fire Prevention Measures for Gas Welding and Gas Cutting</p> <p>The Contractor shall refer to and comply with JSSS 7.9 [Welding and Gas Cutting Works] for the fire prevention requirements for welding and gas cutting works.</p> <p>To be coordinated later after receipt of JSSS 7.9</p>	<p>and facilities at the Site as are necessary to fully protect all Contractor's Personnel and Employer's Personnel, to compensate for any such lack of available public services or facilities.</p> <p>(1) Such additional facilities may include sufficient temporary water and power supply to maintain emergency use.</p> <p>(2) Enhanced fire protection equipment and facilities around the Site.</p> <p>2.8.7. Fire Prevention Measures for Gas Welding and Gas Cutting</p> <p>JC: gas welding はほとんどやらないと理解。7.9 に合わせる。 Gas welding is seldom used actually. Match with JSSS 7.9.</p> <p>NK: 7.8 specifies "Electric and Gas Welding and Cutting". Title is changed as right.</p> <p>The Contractor shall refer to and comply with JSSS 7.9 [Welding and Gas Cutting Works] for the fire prevention requirements for welding and gas cutting works.</p>	<p>Personnel, to compensate for any such lack of available public services or facilities.</p> <p>(1) Such additional facilities may include sufficient temporary water and power supply to maintain emergency use.</p> <p>(2) Enhanced fire protection equipment and facilities around the Site.</p> <p>2.8.7. Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>The Contractor shall refer to and comply with JSSS 7.8 [Electric and Gas Welding and Cutting] for the fire prevention requirements for electric and gas welding and cutting works.</p>
<p>019.5.14 暫定セット版</p> <p>2.9 現場管理 → 2.9 個人用保護具(以下、節番号は繰上げ)</p> <p>2.10.1 保護具の着用と使用</p> <p>(1) 一般事項 →(a)~(c)規定なし。(理由等下記参照)</p> <p>(a) 請負者は、作業に携わるものに、作業に適した服装を身につけさせるとともに、保護具を携帯させ、必要時には必ず使用させなければならない。</p> <p>(a) 請負者は、本仕様書 1.2.2[引用基準]に従い、下記に規定の保護具を作業員に使用させなければならない。</p> <p>(b) 請負者は、下記に規定のない保護具については、本仕様書内の他の保護具に関する規定に従わなければならない。</p> <p>(2) 保護具の定義及び請負者の責務</p> <p>(a) 保護具は、作業場所での作業員の身体に対し、損傷または機能障害を引き起こす可能性のあるリスクから作業員を防護する個人が使用する用具をいう。→Chapter 1 Annex 1.1 (15) PPE に規定済み。</p> <p>(b) 全ての保護具の構造は、安全が確保された設計であり、かつ作業に適したものでなければならない。→1.32.1、1.32.4 に規定済み。</p> <p>(c) 保護具は、次の(3)に規定の規格に準拠しなければならない。規格に準拠しない保護具の</p>	<p>2.9 PERSONAL PROTECTIVE EQUIPMENT (PPE)</p> <p>2.9.1. General</p> <p>(1) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(2) PPE shall comply with the additional requirements of this Section.</p> <p>(3) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(a) Head Protection;</p> <p>(b) Protective Footwear;</p>	<p>2.9 PERSONAL PROTECTIVE EQUIPMENT (PPE) AND FIRST AID KIT</p> <p>JC: 下記の AED とあわせ PPE から独立した節にしてください。 Please make an independent clause from PPE together with AED provided below.</p> <p>MM: 2.9 PPE: The title of 2.9 will be changed to "PPE and First Aid Kits" and contents will be modified.</p> <p>NK: Tentatively to make 2.9.1 PPE and 2.9.2 First Aid Kit as right.</p> <p>2.9.1. General</p> <p>(1) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(2) PPE shall comply with the additional requirements of this Section.</p> <p>(3) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(a) Head Protection;</p> <p>(b) Protective Footwear;</p>	<p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT</p> <p>2.9.1. Personal Protective Equipment (PPE)</p> <p>(1) General</p> <p>(a) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(b) PPE shall comply with the additional requirements of this Section.</p> <p>(c) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p>

場合、請負者は同等の規格以上であることを証明する資料を、エンジニアへ提出し、同意を得なければならない。→2.9.2以降の各款に規定済み。

- (d) 請負者は、作業員に保護具を無償で提供し、作業現場に携帯させ、必要時には必ず使用させなければならない。→無償で提供規定なし。追記する。
- (e) 請負者は、作業員に保護具を作業開始前に点検させなければならない。→規定なし。追記する。
- (f) 請負者は、保護具の維持管理・衛生に責任を持ち、異常を認めた場合には補修又は取り替えなければならない。→1.32.2に規定済み。

理由：英文案では本節の一般事項として次のように規定している。

2.9.1 PERSONAL PRTECTIVE EQUIPMENT (PPE)

2.9.1 General

Further to the requirements of JSSS 1.32 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment (PPE)] the Contractor shall comply with the additional requirements of this Section.

NK - The following (as deleted) is generally covered by JSSS 1.32 and is therefore deleted to avoid duplication

MD案では上記のように1.32の内容と重複するとして削除しているが、その内容は包括的で具体的にPPEに言及している部分は少ない。→(NKの方針：各PPEを規定していることからMD案通りとする。)

(3) 保護具の目的と規格

保護具の目的と適用する規格は以下である。

(a) 保護帽

保護帽は、物体の飛来落下と衝突、墜落・転倒時における頭部への衝撃の低減又は感電から作業員の頭部の保護を目的とする。

保護帽は、次の規格の要求事項に見合う物を使用しなければならない。→E2.9.2で規定済み

保護帽の適用規格

	規格番号	規格名
1	JIS T8131	産業用ヘルメット/ Industrial safety helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial safety helmets

(c) 安全靴

安全靴は、物体の落下や挟まれによる作業員の足の怪我の低減、鋭利物の踏み抜きの防止、感電防止又は靴の滑りによる転倒を防止

(c) Work Clothing;

- (4) The following additional PPE shall be provided whenever required by the working environment:
 - (a) Eye and Face Protection;
 - (b) Ear Protection
 - (c) Respiratory Protection
 - (d) Safety Belts
 - (e) Gloves
- (5) First-aid Kits and First-Aid Equipment must always be provided.
- (6) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.

2.9.2. Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against from electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

	Standard	Title of Standard
1	JIS T8131	Industrial Safety Helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial Safety Helmets

2.9.3. Protective Footwear

Protective footwear shall protect against foot injury due to crushing by superimposed loads, impact

~~(c) Work Clothing;~~

JC: デフォルトにはしない。This shouldn't be a "default".

MM: 2.9.9 Work Clothing The 2.9.9 will be left after modification to provide work clothing depending upon the type of works.

NK: moved to (4)(c) as right.

- (4) The following additional PPE shall be provided whenever required by the working environment:
 - (a) Eye and Face Protection;
 - (b) Ear Protection
 - (c) Respiratory Protection
 - ~~(d) Safety Belts~~
 - (e) Gloves
- (5) First-aid Kits and First-Aid Equipment must always be provided.
- (6) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.

NK: Modified as right to cover Safety Belts and harness.

2.9.2. Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against from electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

	Standard	Title of Standard
1	JIS T8131	Industrial Safety Helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial Safety Helmets

2.9.3. Protective Footwear

Protective footwear shall protect against foot injury due to crushing by superimposed loads, impact

- (i) Head Protection;
- (ii) Protective Footwear; and
- ~~(iii) Work Clothing~~

- (d) The following additional PPE shall be provided whenever required by the working environment:
 - (i) Eye and Face Protection;
 - (ii) Ear Protection
 - (iii) Respiratory Protection
 - ~~(iv) PPE for PFRS and PFAS (Safety Belts, Full body harnesses, and others)~~
 - (v) Gloves
 - ~~(vi) Work Clothing~~
- (e) First-aid Kits and First-Aid Equipment must always be provided.
- (f) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.

(2) Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against from electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

	Standard	Title of Standard
1	JIS T8131	Industrial Safety Helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial Safety Helmets

(3) Protective Footwear

Protective footwear shall protect against foot injury

することを目的とする。

安全靴は、下の規格の要求事項に見合う物を使用しなければならない。→E2.9.3 で規定済み

安全靴の適用規格

	規格番号	規格名
1	JIS T8101	安全靴/Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20349	Personal protective equipment. Footwear protecting against risks in foundries and welding. Requirements and test methods for protection against risks in welding and allied processes

injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers' from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, electrically conductive or thermally insulating, appropriate footwear shall be selected for the risks identified.

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20349	Personal protective equipment. Footwear protecting against risks in foundries and welding. Requirements and test methods for protection against risks in welding and allied processes

injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers' from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, electrically conductive or thermally insulating, appropriate footwear shall be selected for the risks identified.

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

JC: 防爆性の導電靴・導電靴の話をするのなら、日本だと、JIS T 8103 静電気帯電防止靴がある。だけど、

日本と欧米で電力の接地システムの仕組みが違うため、静電靴の規格が違う。IEC 規格では抵抗の値に下限がないが、日本では下限を生じないと、接地システムの違いから感電の危険が生じる。ので、使えない。が、欧米規格はあるはずだけど、断熱・耐熱は特殊用途なので日本では基準無し

JIS T 8103 specifies explosion-proof conductive shoes or conductive shoes. However, because of difference in power grounding system in Japan and in Europe and America, the standard for static electricity free shoes is also different.

In the IEC standard, there is no lower limit of resistance value. On the other hand, it cannot be used in Japan due to the difference of the grounding system which may induce the danger of electric shock.

There should be European and American standard, however.

There is no standard in Japan for insulation and heat resistance shoes because they are for special purposes.

NK: ASTM F2413 covers the Static electricity. According the Laws of the Country, standards shall be selected for footwear.

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20349	Personal protective equipment. Footwear protecting against risks in foundries and welding. Requirements and test methods for protection against risks in welding and allied processes

JC: 上のコメントのとおり JIS T8103 について確認願います。 Please confirm about JIS T 8103 as stated the comment above.

NK: JIS T 8103 is for Anti electrostatic footwear. It is in Japanese and not ye translated to English. The anti electrostatic is covered by the following ASTM and BS:

ASTM F2413:
4.1.1 Impact resistance
4.1.2 Compression resistance

due to crushing by superimposed loads, impact injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers' from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, electrically insulating or thermally insulating, appropriate footwear shall be selected for the risks identified.

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20346 BS EN ISO 20349	Personal protective equipment - Protective footwear Personal protective equipment. Footwear protecting against risks in foundries and welding

JC: 上のコメントのとおり JIS T8103 について確認願います。

(d) 保護眼鏡及び保護面

保護眼鏡及び保護面は、浮遊粉じん、薬液飛まつ、飛来物、溶融金属、化学ガス・蒸気、有害光線等から作業員の目及び顔の保護を目的とする。

保護眼鏡及び保護面は、下の規格の要求事項に見合う物を使用しなければならない。→E2.9.4で規定済み

保護眼鏡及び保護面の適用規格

規格番号	規格名
1 JIS T 8141 JIS T 8142	遮光保護具/ Personal eye protectors for optical radiations 溶接用保護面/ Personal face protectors for welding
2 ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
3 BS EN 166 BS EN ISO 4007	Personal eye protection. Specifications Personal protective equipment. Eye and face protection. Vocabulary

(e) 防音保護具

防音保護具は、防音により作業員の聴覚障害を防止する目的とする。

防音保護具は、下の規格の要求事項に見合う物を使用しなければならない。→E2.9.5で規定済み

防音保護具の適用規格

規格番号	規格名
1 JIS T 8161	防音保護具/ Ear protectors

2.9.4. Eye and Face Protection

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

Standard	Title of Standard
1 JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
2 ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
3 BS EN 166 BS EN ISO 4007	Personal eye protection. Specifications Personal protective equipment. Eye and face protection. Vocabulary

2.9.5. Ear Protection

Ear protection shall protect workers' hearing against injury from continuous, loud or Intense Noise by providing soundproofing.

The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

- 4.1.3 Metatarsal protection
- 4.1.4 Static electricity buildup, and for ignition of explosives and volatile chemicals,
- 4.1.5 Electric hazard stepping on live electric wires
- 4.1.6 Static dissipative properties for static charge with live electrical circuits, and
- 4.1.7 Puncture resistance

BS EN ISO 20346

- 5.3.2.3 Impact resistance of protective footwear
- 5.3.2.4 Compression resistance of protective footwear
- 6.2.1 Penetration resistance
- 6.2.2.1 Conductive footwear
- 6.2.2.2 Antistatic footwear
- 6.2.2.3 Electrically insulating footwear
- Other requirements

NK: Add BS EN ISO 20346 and change the description to the right.

2.9.4. Eye and Face Protection

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

Standard	Title of Standard
1 JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
2 ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
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Ear protection shall protect workers' hearing against injury from continuous, loud or Intense Noise by providing soundproofing.

The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

(4) Eye and Face Protection

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

Standard	Title of Standard
1 JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
2 ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
3 BS EN 166 BS EN ISO 4007	Personal eye protection. Specifications Personal protective equipment. Eye and face protection. Vocabulary

(5) Ear Protection

Ear protection shall protect workers' hearing against injury from continuous, loud or Intense Noise by providing soundproofing.

The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
3	BS EN ISO 4869-1 BS EN ISO 4869-2 BS EN ISO 4869-3 BS EN ISO 4869-4	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs

2.1.1 粉じんが発生する場所での必要な措置

有効な粉じんの低減の措置を図ることが難しく、短時間・暫定的な作業の場合に限り、保護具の活用を認める。この場合においては、次表の規格に適合する保護具又は規格に従い選定した保護具を使用させなければならない。

Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

	Standard	Title of Standard
1	JIS T 8161	Ear protectors
2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
3	BS EN ISO 4869-1 BS EN ISO 4869-2 BS EN ISO 4869-3 BS EN ISO 4869-4	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration earmuffs

2.9.6. Respiratory Protection

Respiratory protection shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

Respiratory protection shall fit properly and be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.

Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.

Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

	Standard	Title of Standard
1	JIS T 8161	Ear protectors
2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
3	BS EN ISO 4869-1 BS EN ISO 4869-2 BS EN ISO 4869-3 BS EN ISO 4869-4	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs

2.9.6. Respiratory Protection

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Respiratory protection shall fit properly and be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.

JC: for user ?

NK: referring to Respiratory Protection Handbook:

https://books.google.co.jp/books?id=hxCtLEjWOKMC&pg=PA91&lpg=PA91&dq=Respiratory+protection+shall+fit+properly&source=bl&ots=h25b4T2SA&sig=ACfu3U1pB810_wnsSRBR_Zk2Qd3NXp3Lg&hl=ja&sa=X&ved=2ahUKFwin26qb7fjnAhUjvslsBHRMbdDdcQ6AEwDnoEC_AoQAQ#v=onepage&q=Respiratory%20protection%20shall%20fit%20properly&f=false

Added "equipment (RPE) and "to worker's face" as right.

Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.

JC: 重要。このほかの項目でも何か留意事項ないか？ Important. Are there any matters to be considered other than this?

NK: The specification above is made referring to the following HSE:

- 1) Personal protective equipment (PPE) at work, A brief guide, <https://www.hse.gov.uk/pubns/indg174.pdf>
- 2) Respiratory protective equipment at work, practical guide, HSG53 (Fourth edition, published 2013). <https://www.hse.gov.uk/pubns/priced/hsg53.pdf>

Addition for maintenance and reference is added as right.

Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

	Standard	Title of Standard
1	JIS T 8161	Ear protectors
2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
3	BS EN ISO 4869-1 BS EN ISO 4869-2 BS EN ISO 4869-3 BS EN ISO 4869-4	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs

(6) Respiratory Protection

Respiratory protection shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

Respiratory protection equipment (RPE) shall fit properly to worker's face and be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.

When replacing them or any other part, check with the manufacturer's guidance and ensure the correct replacement part is used.

Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.

Maintenance is a requirement for all RPE, except for disposable (single use) RPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month. However, if the RPE is used only occasionally, an examination and test should be carried out before use and, in any event, the interval should not exceed three months. Emergency escape-type RPE should be examined and tested in accordance with the manufacturer's instructions.

	規格番号	規格名
1	JIS T 8151 JIS T 8157	防じんマスク/Particulate respirator 電動ファン付き呼吸用保護具/ Powered air purifying respirator
2	1) BS EN 149: 2001+A1: 2009 2) BS EN 14593-1: 2018	1) Respiratory protective devices. Filtering half masks to protect against particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

(f) 墜落制止用器具

墜落制止用器具は、高所又は急斜面における作業員の墜落及び滑落による被災を防止することを目的とする。

墜落制止用器具は、下の規格の要求事項に見合う物を使用しなければならない。→E2.9.7 で規定済み

Table 2.9.5: Table of PPE for Respiratory Protection

	Standard	Title of Standard
1	JIS T 8151 JIS T 8157	Particulate respirator Powered air purifying respirator
2	BS EN 149: 2001+A1: 2009 2) BS EN 14593-1: 2018	1) Respiratory protective devices. Filtering half masks to protect against particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

2.9.7. Safety Belts

Safety belts shall prevent the risk of workers falling from a height or sliding down slopes.

For further requirement on PPE for fall prevention, refer to **ISSS 2.5.13 [PPE for Fall Prevention]**.

Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: Table of PPE for Respiratory Protection

	Standard	Title of Standard
1	JIS T 8151 JIS T 8157	Particulate respirator Powered air purifying respirator
2	BS EN 149: 2001+A1: 2009 2) BS EN 14593-1: 2018	1) Respiratory protective devices. Filtering half masks to protect against particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

2.9.7. Safety Harnesses and Belts

JC: PFAS に限定せず、PFRS を採用するにしても、belt 前提のタイトルはまずい(Safety Harnesses and Belts) いまさらだけど、BS は細かく分かれていて、これは本当にハーネスだけなのでベルトは入っていないはず、かつ、他のコネクタとかはまた別

BS EN 354 PPE - Lanyards

BS EN 358 PPE - Work positioning systems

BS EN 362 PPE - Connectors *みたいな感じ*

ご参考

<https://www.safety-height.co.uk/products-services/performance-standards/>

ベルトは保持装置にあるんじゃないかと

Even if using PFRS without limiting to PFAS, the title assuming use of belt is not appropriate. (Safety Harnesses and Belts.)

BS is specifying these in various items. This should be about harnesses only not including belts and other connectors are separately specified.

BS EN 354 PPE - Lanyards

BS EN 358 PPE - Work positioning systems

BS EN 362 PPE - Connectors

Belt may be specified in holding devises.

NK: Modified as right.

Safety belts shall prevent the risk of workers falling from a height or sliding down slopes.

For further requirement on PPE for fall prevention, refer to **ISSS 2.5.13 [PPE for Fall Prevention]**.

Safety belts shall ensure a level of performance that is equal to or greater than the following standards.

In addition to the requirements above, the Contractor shall select, use and maintain RPE referring to Respiratory protective equipment at work, practical guide, HSG53 (Fourth edition, published 2013).

Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: Table of PPE for Respiratory Protection

	Standard	Title of Standard
1	JIS T 8151 JIS T 8157	Particulate respirator Powered air purifying respirator
2	BS EN 149: 2001+A1: 2009 BS EN 14593-1: 2018	Respiratory protective devices. Filtering half masks to protect against particles. Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

(7) Safety Harnesses and Belts

Safety-belts PPE for PFRS shall prevent the risk of workers falling from a height or sliding down slopes. PPE for PFAS shall arrest a worker in a fall from a height or sliding down slopes.

墜落制止用器具の適用規格		
	規格番号	規格名
1	JIS T8165	墜落制止用器具/ Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN 361	Personal protective equipment against falls from a height. Full body harnesses

(g) 手袋

手袋は、作業員の感電防止、溶接及び溶断作業における火花、熔融金属、熱せられた金属などから手を保護すること及び工具、機械から手袋を通して手に伝わる振動を軽減することを目的とする。

手袋は、下の規格の要求事項に見合う物を使用しなければならない。→E2.9.8で規定済み

手袋の適用規格

	規格番号	規格名
1	JIS T 8112 JIS T 8113 JIS T 8114	電気絶縁用手袋/ Gloves of insulating material used for electrical working 溶接用かわ製保護手袋/ Protective Leather Gloves for Welders 防振手袋/ Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (a nationally adopted international standard)
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

(参考) 英文案では、他に次を追加規定している。

- 2.9.6 Respiratory Protection
- 2.9.9 Working Clothing
- 2.9.10 First Aid Kits

Safety belts shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for Safety Belts

	Standard	Title of Standard
1	JIS T8165	Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN 361	Personal protective equipment against falls from a height. Full body harnesses

2.9.8. Gloves

Gloves shall protect workers' hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers' hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8112 JIS T 8113 JIS T 8114	Gloves of insulating material used for electrical working Protective Leather Gloves for Welders Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (a nationally adopted international standard)
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

	Standard	Title of Standard
1	JIS T8165	Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN 361	Personal protective equipment against falls from a height. Full body harnesses

JC: これはハーネスの規定なので restraint の記載がないのは、安全ベルトが BS のどこに規定されているのか確認のうえ、追記願います。BS EN 358 あたりを確認ください。

This is a standard for harnesses; thus, it probably does not stipulate about "restraint". Please add safety belts after confirming which part of BS stipulates safety belt. It is advisable to check BS EN 358.

NK: The following is added as commented.

BS EN 358:2018 Personal protective equipment for work positioning and prevention of falls from a height. Belts and lanyards for work positioning or restraint

2.9.8. Gloves

Gloves shall protect workers' hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers' hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8112 JIS T 8113 JIS T 8114	Gloves of insulating material used for electrical working Protective Leather Gloves for Welders Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (a nationally adopted international standard)
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

2.9.9. Work Clothing

~~All personnel shall be supplied with and shall wear suitable protective work clothing appropriate for their work tasks. In general, all personnel shall be provided with overalls.~~

~~Further risks such as from chemical or metal splash, spray from pressure leaks or spray guns,~~

For further requirement on PPE for fall prevention, PFRS and PFAS refer to JSSS 2.5.13 (Personal Protective Equipment for Fall Prevention).

PPE for PFRS and PFAS Safety belts shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for Safety Belts PPE for PFRS and PFAS

	Standard	Title of Standard
1	JIS T8165	Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN 361 BS EN 358	Personal protective equipment against falls from a height. Full body harnesses Personal protective equipment for work positioning and prevention of falls from a height. Belts and lanyards for work positioning or restraint

(8) Gloves

Gloves shall protect workers' hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers' hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8112 JIS T 8113 JIS T 8114	Gloves of insulating material used for electrical working (Japanese only) Protective Leather Gloves for Welders Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (a nationally adopted international standard) (too long)
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

	<p>2.9.9. Work Clothing</p> <p>All personnel shall be supplied with and shall wear suitable protective work clothing appropriate for their work tasks. In general, all personnel shall be provided with overalls.</p> <p>Further risks such as from chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, entanglement of own clothing, heat, cold etc. shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame-retardant, anti-static, chain mail, chemically impermeable, and high-visibility clothing and the like.</p> <p>Work clothing shall be selected and provided for the risks to be identified.</p> <p>Work clothing shall be kept reasonably clean and shall be replaced when worn out or damaged.</p> <p>2.9.10. First-aid Kits</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid” of “Part 1910 - Occupational Safety and Health Standards” and as follows.</p> <p>The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.</p> <p>All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the First aid Kit(s).</p> <p>Each first-aid kit should contain at least the following:</p> <ol style="list-style-type: none"> (1) an up-to-date first-aid manual (2) a list of emergency phone numbers (3) waterless hand cleaner (4) sterile gauze pads of different sizes (5) adhesive tape (6) adhesive bandages in several sizes 	<p>contaminated dust, impact or penetration, entanglement of own clothing, heat, cold etc. shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame retardant, anti-static, chain mail, chemically impermeable, and high visibility clothing and the like.</p> <p>Work clothing shall be selected and provided for the risks to be identified.</p> <p>Work clothing shall be kept reasonably clean and shall be replaced when worn out or damaged.</p> <p>JC: デフォルトにしない前提にたち、削除。 The premise is that this is not a default. Delete.</p> <p>MM: 2.9 Work Clothing: The 2.9.9 will be left after modification to provide work clothing depending upon the type of works.</p> <p>NK: Modified and left as right.</p> <p>2.9.10. First-aid Kits</p> <p>JC: 下記の AED とあわせ PPE から独立した節にしてください。 Please make an independent clause from PPE together with AED provided below.</p> <p>MM: 2.9 PPE: The title of 2.9 will be changed to “PPE and First Aid Kits” and contents will be modified.</p> <p>NK: Tentatively to make 2.9.1 PPE and 2.9.2 First Aid Kit as right.</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid” of “Part 1910 - Occupational Safety and Health Standards” and as follows.</p> <p>JC: https://up.codes/viewer/osha-1910-general-industry/chapter/K/medical-and-first-aid#K</p> <p>The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.</p> <p>All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the First aid Kit(s).</p> <p>Each first-aid kit <u>should contain at least the following</u>:</p> <p>JC: 意図的な should なのか、要確認。 It this “should” used with any intention? Please confirm.</p> <p>NK: Items list of First Aid Kits are not mandatory as APPENDIX A TO §1926.50—FIRST AID KITS (NON-</p>	<p>(9) Work Clothing</p> <p>Contractor’s Personnel All personnel shall be supplied with and shall wear suitable protective work clothing required by the working environment appropriate for their work tasks. In general, all personnel shall be provided with overalls.</p> <p>Further risks such as from chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, entanglement of own clothing, heat, cold, etc. shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame-retardant, anti-static, chain mail, chemically impermeable, and high-visibility clothing and the like.</p> <p>Work clothing shall be selected and provided for the risks to be identified.</p> <p>Work clothing shall be kept reasonably clean and shall be replaced when worn out or damaged.</p> <p>2.9.2. First-aid Kits</p> <p>(1) General</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid” of “Part 1910 - Occupational Safety and Health Standards” and as follows.</p> <p>The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.</p> <p>All persons working at the site need to be aware of their purpose and location. Adequate signage shall</p>
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- (7) elastic and cotton bandages
- (8) a splint
- (9) antiseptic wipes
- (10) antibiotic ointment
- (11) antiseptic solution (such as hydrogen peroxide)
- (12) hydrocortisone cream (1%)
- (13) acetaminophen and ibuprofen
- (14) tweezers
- (15) sharp scissors
- (16) safety pins
- (17) alcohol wipes or ethyl alcohol
- (18) thermometer
- (19) flashlight and extra batteries
- (20) a blanket

To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, CPR breathing barriers, eye protection and like supplies.

MANDATORY), therefore not “shall” but “should”.

JC: 個数の前安とか OSHA にある? この例示はどこから?
Where did the numbers of first-aid kits come from, OSHA?

NK: The following seems to be listed form HSE (not yet confirmed.)

- (1) an up-to-date first-aid manual
 - (2) a list of emergency phone numbers
 - (3) waterless hand cleaner
 - (4) sterile gauze pads of different sizes
 - (5) adhesive tape
 - (6) adhesive bandages in several sizes
 - (7) elastic and cotton bandages
 - (8) a splint
 - (9) antiseptic wipes
 - (10) antibiotic ointment
 - (11) antiseptic solution (such as hydrogen peroxide)
 - (12) hydrocortisone cream (1%)
- JC: Anti-itch ointment
- (13) acetaminophen and ibuprofen
 - (14) tweezers
 - (15) sharp scissors
 - (16) safety pins
 - (17) alcohol wipes or ethyl alcohol
 - (18) thermometer
 - (19) flashlight and extra batteries
 - (20) a blanket

NK: The items marked yellow color are same in ANSI Z308.1-2015, but the following items are not listed above.

- Breathing Barrier
- Burn Dressing (gel soaked)
- Burn Treatment
- Cold Pack
- Eye Covering, with means of attachment
- Eye/Skin Wash
- Tourniquet
- Trauma pad
- Triangular Bandage

NK: For easily find items of First Aid Kit, items in ANSI Z308.1-2015 is listed as right.

To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, CPR breathing barriers, eye protection and like supplies.

JR: 略号は出てない? ANZI には標準で入っている cardiopulmonary resuscitation 心肺蘇生法 口をつけないで人口呼吸を行うためのマスク No abbreviation? In ANZI, abbreviations are commonly shown. CRP: CardioPulmonary Resuscitation

NK: Added as right.

2.9.11. First-Aid Equipment - AED

be provided at the Site to show the location of the first aid kit(s).

(2) First-Aid Kit

Each following first-aid kit should contain at least the following items, specifications and quantities listed in ANSI Z308.1-2015 according to the work:

- (a) Adhesive Bandage
- (b) Adhesive Tape
- (c) Antibiotic Application
- (d) Antiseptic
- (e) Breathing Barrier
- (f) Burn Dressing (gel soaked)
- (g) Burn Treatment
- (h) Cold Pack
- (i) Eye Covering, with means of attachment
- (j) Eye/Skin Wash
- (k) First Aid Guide
- (l) Hand Sanitizer
- (m) Medical Exam Gloves
- (n) Roller Bandage
- (o) Scissors
- (p) Splint
- (q) Sterile pad
- (r) Tourniquet
- (s) Trauma pad
- (t) Triangular Bandage

To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, Cardiopulmonary Resuscitation (CPR) breathing barriers, eye protection and like supplies.

2.9.11. First-Aid Equipment - AED

Unless otherwise stated in the bidding Documents and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.

The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.

All personnel at the site need to be aware of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.

Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.

AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	IEC STANDARD 60601-2-4	Medical electrical equipment, Part 2-4: Particular requirements for the safety of cardiac defibrillators

Unless otherwise stated in the ~~bidding Documents~~ and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.

The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.

All personnel at the site need to be aware of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.

Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.

AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	IEC STANDARD 60601-2-4	Medical electrical equipment, Part 2-4: Particular requirements for the safety of cardiac defibrillators

JC: BS EN に修正すべき This should be changed to BS EN.
NK: Revised from IEC to BS as right.

IEC 60601-2-4:2010/AMD1:2018 Medical electrical equipment - Part 2-2: Particular requirements for the basic safety and essential performance of cardiac defibrillators

< 仮訳 > 医用電気機器—第2—4 部: 細動除去機の基礎安全及び基本性能に関する個別要求事項

2010 に対応した BS があるはず→これ、BS EN 60601-2-4:2011+A1:2019

参考用なら IEC 旧 2002 版は閲覧可能
<https://www.sis.se/api/document/preview/559961/>
IEC60601 医療機器に対応した JIS T0601 シリーズがあるが、除細動器は JIS T1355、2006/11/27 廃で、その後の JIS 対応規格がない(?)
<https://ja.wikipedia.org/wiki/%E6%97%A5%E6%9C%AC%E7%94%A3%E6%A5%AD%E8%A6%8F%E6%A0%BC%EF%BC%88%E5%8C%BB%E7%99%82%E5%AE%89%E5%85%A8%E7%94%A8%E5%85%B7%EF%BC%89%E3%81%AE%E4%B8%80%E8%A6%A7>

JC: ANSI/AAMI/IEC 60601-2-4:2010/A1:2018 もある

<https://webstore.ansi.org/Standards/AAMI/ANSIAAMIIEC606012010A12018>

[ANSI/ISEA Z308.1-2015](#)

(3) Automated External Defibrillator (AED)

Unless otherwise stated in ~~the bidding Documents Contract~~ and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.

The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.

All personnel at the site need to be aware of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.

Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.

AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	BS EN 60601-2-4:2011+A1:2019	Medical electrical equipment. Particular requirements for the basic safety and essential performance of cardiac defibrillators

SUPPLY	MINIMUM QUANTITY		MINIMUM SIZE/VOLUME	
	Class A	Class B	United States	Metric
Adhesive bandages	16	50	1 x 3 in.	2.5 x 7.5 cm
Adhesive tape	1	2	2.5 yds. (total)	2.3 m
Antibiotic application	10	25	1/57 oz.	0.5 g
Antiseptic	10	50	1/57 oz.	0.5 g
Breathing barrier	1	1	N/A	N/A
Burn dressing (gel soaked)	1	2	4 x 4 in.	10 x 10 cm
Burn treatment	10	25	1/22 oz.	0.9 g
Cold pack	1	2	4 x 5 in.	10 x 12.5 cm
Eye covering (w/means of attachment)	2	2	2.9 sq. in.	19 sq. cm
Eye/skin wash	1 fl. oz. total			29.6 ml
		4 fl. oz. total		118.3 ml
First aid guide	1	1	N/A	N/A
Hand sanitizer	6	10	1/32 oz.	0.9 g
Medical exam gloves	2 pair	4 pair	N/A	N/A
Roller bandage (2-inch)	1	2	2 in. x 4 yd.	5 cm x 3.66 m
Roller bandage (4-inch)	0	1	4 in. x 4 yd.	10 cm x 3.66 m
Scissors	1	1	N/A	N/A
Spine	0	1	4 x 24 in.	10.2 x 41 cm
Sterile pads	2	4	3 x 3 in.	7.5 x 7.5 cm
Tourniquet	0	1	1 in. (width)	2.5 cm (width)
Trauma pads	2	4	5 x 9 in.	12.7 x 22.9 cm
Triangular bandage	1	2	40 x 40 x 56 in.	101 x 101 x 142 cm

上記 OSHA の引用は正確にはこれの前々版の 1998 版

ANSI Z308.1-1998 – Minimum Requirements for Workplace First Aid Kits Basic kit – minimum contents	
Item	Minimum quantity
Absorbent compress, 32 sq. in. (81.3 sq. cm.) with no side smaller than 4 in. (10 cm.)	1
Adhesive bandages, 1 in. x 3 in. (2.5 cm. x 7.5 cm.)	16
Adhesive tape, 5 yd. (457.2 cm.) total	1
Antiseptic, 0.5g (0.14 fl. oz.) applications	10
Burn treatment, 0.5g (0.14 fl. oz.) applications	6
Medical exam gloves	2 pair
Sterile pads, 3 in. x 3 in. (7.5 x 7.5 cm.)	4
Triangular bandage, 40 in. x 40 in. x 56 in. (101 cm. x 101 cm. x 142 cm.)	1

Optional contents	
Optional items and sizes should be added to the basic contents listed above to augment a first aid kit, based on the specific hazards existing in a particular work environment. Optional items addressed in ANSI Z308.1-1998 (listed below) must meet the minimum requirements of Section 5.3 of that standard. Items not addressed by the ANSI standard must comply with standards or regulations, where applicable, established by the U.S. Food and Drug Administration (FDA), the current edition of the U.S. Pharmacopoeia/National Formulary (USP/NF) or other standards-writing body.	
Bandage compress – 2 in. x 2 in.	4
3 in. x 3 in.	2
4 in. x 4 in.	1
Eye covering with means of attachment	1
Eye wash – 1 fl. oz. (30 ml)	1
Cold pack – 4 in. x 5 in.	1
Roller bandage – 2 in. (5 cm)	2
4 in. (10 cm)	1

Note: A CPR barrier is also recommended, but not required.

**JICA Standard Safety Specification Preparation Study
2 General Requirements (English R2 for Issue 3)**

2019.9.3 Japanese Final
2019.11.19 NK Issue 2
2019.12.17 JICA Comments
2020.3.4NK Draft ER2

JSSS in Japanese (2019/9/3)	JSSS in English Issue 2 (2019/11/19)	JICA Comments (2019/12/17) JC: JICA Comments in blue letters on sentence underlined MM: Minutes of Meeting in2020/01 NK: NK actions	JSSS in English R2 for Issue 3 (2020/3/4) Sentences marked yellow color are added or modified ones from the last version.
<p>目次</p> <p>2 安全措置一般</p> <p>2.1 適切な作業環境の整備</p> <p>2.1.1 粉じんが発生する場所での必要な措置</p> <p>2.1.2 換気の悪い場所においての必要な措置</p> <p>2.1.3 強烈な騒音を発生する場所等での必要な措置</p> <p>2.1.4 閉鎖空間における安全措置</p> <p>2.1.5 高温多湿な作業環境下での必要な措置</p> <p>2.1.6 作業環境の把握</p> <p>2.2 工事現場周辺の危害防止</p> <p>2.2.1 工事区域の立入防止施設</p> <p>2.2.2 道路占用時の措置</p> <p>2.2.3 看板・標識の整備</p> <p>2.2.4 工事現場出入口付近での交通事故防止</p> <p>2.2.5 地域住民とのコミュニケーション</p> <p>2.3 立入禁止の措置</p> <p>2.4 監視員、誘導員の配置</p> <p>2.4.1 監視員、誘導員の配置</p> <p>2.4.2 合図の統一</p> <p>2.5 墜落防止</p> <p>2.5.1 一般事項</p> <p>2.5.2 通路からの墜落防止措置</p> <p>2.5.3 足場・作業床からの墜落防止措置</p> <p>2.5.4 作業床端、開口部からの墜落防止措置</p> <p>2.5.5 掘削作業における墜落防止措置</p> <p>2.5.6 ロープ高所作業における墜落防止措置</p> <p>2.5.7 作業員に対する措置</p> <p>2.5.8 墜落防止に関する保護具</p> <p>2.6 飛来落下の防止措置 0</p> <p>2.6.1 物体の落下による危険防止のための措置</p> <p>2.6.2 作業による飛来物による危険防止のための措置</p> <p>2.6.3 物体投下による危険防止のための措置</p> <p>2.6.4 高所の作業場所の材料等の集積による危険防止のための措置</p> <p>2.6.5 上下作業時の落下物による危険防止のための措置</p> <p>2.7 悪天候及び地震時の対策</p> <p>2.7.1 悪天候及び地震時の緊急事態対応計画</p> <p>2.7.2 悪天候及び地震に備えた準備と点検</p> <p>2.7.3 気象及び地震情報の収集と対応</p> <p>2.7.4 作業の中止と再開</p> <p>2.7.5 大雨に対する措置</p> <p>2.7.6 強風及び暴風に対する措置</p> <p>2.7.7 雪に対する措置</p>	<p>2. GENERAL SAFETY MEASURES</p> <p>2.1 WORK ENVIRONMENT</p> <p>2.1.1 Hazardous Substances</p> <p>2.1.2 Poor Ventilation</p> <p>2.1.3 Noise</p> <p>2.1.4 Further Requirements for Dangerous Work</p> <p>2.1.5 High and Low Temperatures and Humidity</p> <p>2.1.6 Monitoring and Records</p> <p>2.1.7 Hearing Conservation Program</p> <p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1 General</p> <p>2.2.2 Secure Site Perimeter</p> <p>2.2.3 Measures for Road Occupation</p> <p>2.2.4 Temporary Road Signs</p> <p>2.2.5 Traffic Accident Prevention at Site Entrance</p> <p>2.2.6 Community Relations</p> <p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1 General</p> <p>2.3.2 Demarcation and Requirements</p> <p>2.3.3 Further Definition</p> <p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1 Definitions</p> <p>2.4.2 Duties</p> <p>2.4.3 Placement</p> <p>2.4.4 Safety</p> <p>2.4.5 Signals</p> <p>2.4.6 Qualification of Personnel</p> <p>2.4.7 Radios</p> <p>2.4.8 PPE</p> <p>2.5 FALL PREVENTION</p> <p>2.5.1 General Items</p> <p>2.5.2 Height Thresholds</p> <p>2.5.3 Facilities for Ascending and Descending</p> <p>2.5.4 Risk Assessments</p> <p>2.5.5 Handrails</p> <p>2.5.6 Temporary Walkways and Passageways</p> <p>2.5.7 Preventing Falls by Providing Temporary Working Platforms</p> <p>2.5.8 Preventing Falls from the Ends and Openings of Working Platforms 14</p> <p>2.5.9 Measures for Preventing Falls during Excavation Work</p> <p>2.5.10 Measures for Preventing Falls during Rope Access Work</p> <p>2.5.11 Further Measures for Contractor’s Personnel</p> <p>2.5.12 Personal Protective Equipment for Fall Prevention</p> <p>2.5.13 Portable Ladders and Stepladders</p> <p>2.5.14 Work on Roofs and Other Areas</p> <p>2.5.15 Safety Nets</p> <p>2.6 FALLING OBJECTS</p>		<p>2 GENERAL SAFETY MEASURES</p> <p>2.1 WORK ENVIRONMENT</p> <p>2.1.1 Hazardous Substances</p> <p>2.1.2 Poor Ventilation</p> <p>2.1.3 Noise</p> <p>2.1.4 Further Requirements for Dangerous Work</p> <p>2.1.5 High and Low Temperatures and Humidity</p> <p>2.1.6 Monitoring and Records</p> <p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1 General</p> <p>2.2.1.1 Secure Site Perimeter</p> <p>2.2.2.1 Measures for Road Occupation</p> <p>2.2.2.2 Temporary Road Signs</p> <p>2.2.2.3 Traffic Accident Prevention at Site Entrance</p> <p>2.2.2.4 Community Relations</p> <p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1 General</p> <p>2.3.2 Demarcation and Requirements</p> <p>2.3.3 Example of Dangerous Work</p> <p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1 Definitions</p> <p>2.4.2 Duties</p> <p>2.4.3 Placement</p> <p>2.4.4 Safety</p> <p>2.4.5 Signals</p> <p>2.4.6 Qualification of Personnel</p> <p>2.4.7 Communication tools</p> <p>2.4.8 PPE</p> <p>2.5 FALL PREVENTION</p> <p>2.5.1 General</p> <p>2.5.2 Height Thresholds</p> <p>2.5.3 Facilities for Ascending and Descending</p> <p>2.5.4 Risk Assessments</p> <p>2.5.5 Handrails</p> <p>2.5.6 Toeboards</p> <p>2.5.7 Temporary Walkways and Passageways</p> <p>2.5.8 Preventing Falls by Providing Temporary Working Platforms</p> <p>2.5.9 Preventing Falls from the Ends and Openings of Working Platforms</p> <p>2.5.10 Measures for Preventing Falls during Excavation Work</p> <p>2.5.11 Measures for Preventing Falls during Rope Access Work</p> <p>2.5.12 Further Measures for Contractor’s Personnel</p> <p>2.5.13 Personal Protective Equipment for Fall Prevention</p> <p>2.5.13.1 Portable Ladders and Stepladders</p> <p>2.5.14.1 Work on Roofs and Other Areas</p> <p>2.5.15.1 Safety Nets</p> <p>2.6 FALLING OBJECTS</p>

<p>2.7.8 雷に対する措置 2.7.9 地震及び津波に対する措置</p> <p>2.8 火災予防 2.8.1 一般 2.8.2 消防体制の確立 2.8.3 防火及び消火のための措置 2.8.4 避難のための措置 2.8.5 可燃物の管理 2.8.6 溶接・溶断による火災の予防</p> <p>2.9 欠番</p> <p>2.10 現場管理 2.10.5 保護具の着用と使用</p>	<p>2.6.1. General 2.6.2. General Preventive Measures 2.6.3. Preventive Measures against Dust and Windblown Debris 2.6.4. Preventive Measures against Dropped Objects 2.6.5. Prevention of Accumulation of Goods at High Levels</p> <p>2.7 ADVERSE WEATHER REQUIREMENTS 2.7.1. General 2.7.2. Preventive Measures 2.7.3. Measures for Heavy Rain 2.7.4. Measures for Strong Wind and Storms 2.7.5. Measures for Heavy Snow and Ice 2.7.6. Measures for Lightning 2.7.7. Measures for Earthquake and Tsunami</p> <p>2.8 FIRE PREVENTION – ADDITIONAL REQUIREMENTS 2.8.1. General 2.8.2. Temporary Facilities - Firefighting System 2.8.3. Measures of Fire Prevention and Firefighting 2.8.4. Measures for Evacuation 2.8.5. Management of Flammable and Combustible Materials 2.8.6. Fire Prevention Measures for Gas Welding and Gas Cutting</p> <p>2.9 PERSONAL PROTECTIVE EQUIPMENT (PPE) 2.9.1. General 2.9.2. Head Protection 2.9.3. Protective Footwear 2.9.4. Eye and Face Protection 2.9.5. Ear Protection 2.9.6. Respiratory Protection 2.9.7. Safety Belts 2.9.8. Gloves 2.9.9. Work Clothing 2.9.10. First-aid Kits 2.9.11. First Aid Equipment - AED</p>		<p>2.6.1. General 2.6.2. General Preventive Measures 2.6.3. Preventive Measures against Dust and Windblown Debris 2.6.4. Preventive Measures against Dropping Objects 2.6.5. Prevention of Accumulation of Goods at High Levels Height</p> <p>2.7 ADVERSE WEATHER REQUIREMENTS 2.7.1. General 2.7.2. Preventive Measures 2.7.3. Measures for Heavy Rain 2.7.4. Measures for Strong Wind and Storms 2.7.5. Measures for Heavy Snow and Ice 2.7.6. Measures for Lightning 2.7.7. Measures for Earthquake and Tsunami 2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>2.8 FIRE PREVENTION 2.8.1. General 2.8.2. Temporary Facilities - Firefighting System 2.8.3. Measures of Fire Prevention and Firefighting 2.8.4. Measures for Evacuation 2.8.5. Management of Flammable and Combustible Materials 2.8.6. Additional Service Requirement 2.8.7. Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT 2.9.1. Personal Protective Equipment 2.9.2. First-aid Kits</p>		
<p>2 安全措置一般 2.1 適切な作業環境の整備 請負者は、良好な作業環境を整備・維持するため、以下を行わなければならない。→E 2.1 に規定済み</p> <p>2.1.1 粉じんが発生する場所での必要な措置 請負者は、土石、岩石、鉱物、セメント等の粉じんが飛散するおそれのある場所では、発生源を湿潤な状態に保つ、発生源を覆う等、粉じんの飛散を防止するための措置とともに、噴霧器、散水設備、換気装置の設置等、当該作業にかかる粉じんの飛散を長時間暴露限界値以下まで減少させるための適切な措置を講じなければならない。→E 2.1.1(5)に規定済み</p> <p>この長時間暴露限界値は、次の表に示す粉じんの数値を含め、英国の Health and Safety Executive (HSE) 発行の EH40/2005 Workplace exposure limits の Table 1: List of approved workplace exposure limits に規定の数値とする。→E 2.1.1(1) (2)に規定済み</p> <table border="1"> <tr> <td>粉じんの種類</td> <td>長時間暴露</td> </tr> </table>	粉じんの種類	長時間暴露	<p>2 GENERAL SAFETY MEASURES 2.1 WORK ENVIRONMENT Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances (1) Definitions Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than: (a) 10 mg/m3 (8-hour TWA) of inhalable</p>	<p>2 GENERAL SAFETY MEASURES 2.1 WORK ENVIRONMENT Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances (1) Definitions Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than: (a) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p>	<p>2 GENERAL SAFETY MEASURES 2.1 WORK ENVIRONMENT Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances (1) Definitions Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than: (a) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p>
粉じんの種類	長時間暴露				

	Long-term exposure limit (8-hr time-weighted average dust; or reference period)	(b) 4 mg/m3 (8-hour TWA) of respirable dust.
	吸入性 (Respirable)	吸引性 (Inhalable)
吸入性結晶シリカ(*)	0.1 mg/m3	-
ポルトランドセメント(*)	4 mg/m3	10 mg/m3

→規定内容変更。→理由:HSE の Table 1 から項目を増やして規定 (MD added items above so that they are coordinated with later 2.1.6 and also because they are often used on JICA funded projects.

MD suggest that gases are also better mentioned here otherwise there is no clear reference basis elsewhere. Asbestos is not included in the above HSE standard and table, therefore the following is added with reference to HSE in this case to keep it consistent with your chosen reference basis:→(NK 方針:JICA コメントあり。英語版から表を削除し、発注者が Special Spec でモニターする種類を規定するよう英文を変更する。)

有効な粉じんの低減の措置を図ることが難しく、短時間・暫定的な作業の場合に限り、保護具の活用を認める。この場合においては、次表の規格に適合する保護具又は規格に従い選定した保護具を使用させなければならない。→E 2.9.6 に規定済み

規格番号		
1	JIS T 8151 JIS T 8157	防じんマスク/Particulate 電動ファン付き呼吸用保
2	1) BS EN 149: 2001+A1: 2009 2) BS EN 14593-1: 2018	1) Respiratory protective against particles. 2) Respiratory protective devices with demand
3	ANSI Z88.2-2015	Practices for Respiratory

(2) Standards

The Contractor shall comply with EH40/2005 Workplace Exposure Limits, (third edition published 2018), issued by HSE. Table 1 shall apply and the Short Term and Long-Term Exposure limits shall not be exceeded.

Table 2.1.1: List of Approved Workplace Exposure Limits (WELs)

Types of Dust/Gas	Long-term Exposure Limit (8 hr TWA Reference Period)	Short-term Exposure Limit (15 minute TWA Reference Period)	Notes
Carbon Dioxide	9150 mg/m3 5000 ppm	27400 mg/m3 15000 ppm	
Carbon Monoxide	23 mg/m3 20 ppm	117 mg/m3 100 ppm	BMGV
	35 mg/m3 30 ppm	232 mg/m3 200 ppm	Mining Only
Chlorine	-	1.50 mg/m3 0.50 ppm	Water treatment
Chlorine dioxide	0.28 mg/m3 0.10 ppm	0.84 mg/m3 0.30 ppm	Water treatment
Hydrogen Sulphide	7 mg/m3 7 ppm	14 mg/m3 14 ppm	Waste Water treatment
Nitrogen Dioxide	0.96 mg/m3 0.50 ppm	1.91 mg/m3 1.00 ppm	Does not apply to underground mining and tunnelling industries until 21/8/23
Nitrogen Monoxide	30 mg/m3 25 ppm	30 mg/m3 1.00 ppm	Limit applicable to underground mining & tunnelling industries ONLY until 21/8/23
Portland Cement: Respirable Inhalable	4 mg/m3 10 mg/m3		
Silica: Respirable Crystalline	0.1 mg/m3	1.5 mg/m3	

(Note: The entire HSE table shall apply, items and values above are extracted samples only)

(b) 4 mg/m3 (8-hour TWA) of respirable dust.

~~Some dusts have been assigned specific WELs as referred to in Table 2.1.1 below.~~

(2) Standards

~~The Contractor shall comply with EH40/2005 Workplace Exposure Limits, (third edition published 2018), issued by HSE. Table 1 shall apply and the Short Term and Long-Term Exposure limits shall not be exceeded.~~

JC: 「HSE に準拠する。具体的に必要となる項目については Annex * * にあるとおり。」といった趣旨を記載して、本文中からは以下の Table 2.1.1 を削除する。Annex は空欄として発注者が実際に必要な項目を書き込めるようなフォーマットを入れておく

This paragraph will be revised to that like “The Contractor shall comply with HSE. The items to be applied are shown in Annex.” The Table 2.1.1 will be deleted from 2.1.1. In Annex, blank table will be attached for the Employer to fill actually required items.

MM: 2.1.1 (2) Standard Table 2.1.1

The Table with detail will be deleted.

The User Guide will require the table to be inserted with the particular monitoring items specified by the Executing Agency/Consultant in the Particular Safety Specification.

NK: The paragraph will be modified as follows (for MD’s review and editing.)

The Contractor shall comply with EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1. The Contractor shall monitor the dusts specified in the Particular Safety Specifications.

Table 2.1.1: List of Approved Workplace Exposure Limits (WELs)

Types of Dust/Gas	Long-term Exposure Limit (8 hr TWA Reference Period)	Short-term Exposure Limit (15 minute TWA Reference Period)	Notes
Carbon Dioxide	9150 mg/m3 5000 ppm	27400 mg/m3 15000 ppm	
Carbon Monoxide	23 mg/m3 20 ppm	117 mg/m3 100 ppm	BMGV
	35 mg/m3 30 ppm	232 mg/m3 200 ppm	Mining Only
Chlorine	-	1.50 mg/m3 0.50 ppm	Water treatment
Chlorine dioxide	0.28 mg/m3 0.10 ppm	0.84 mg/m3 0.30 ppm	Water treatment
Hydrogen Sulphide	7 mg/m3 7 ppm	14 mg/m3 14 ppm	Waste Water treatment
Nitrogen Dioxide	0.96 mg/m3 0.50 ppm	1.91 mg/m3 1.00 ppm	Does not apply to underground mining

(b) 4 mg/m3 (8-hour TWA) of respirable dust.

(TWA means Time weighted average.)

~~Some dusts have been assigned specific WELs as referred to in Table 2.1.1 below.~~

(2) Standards of Workplace Exposure Limits (WELs)

The Contractor shall comply with EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1. The Contractor shall monitor the dusts specified in the Particular Safety Specifications.

			and-tunnelling-industries-until-21/8/23
Nitrogen-Monoxide	30 mg/m ³ 25 ppm	30 mg/m ³ 1.00 ppm	Limit-applicable-to-underground-mining-&-tunnelling-industries-ONLY-until-21/8/23
Portland-Cement-Respirable-Inhalable	4 mg/m ³ 10 mg/m ³		
Silica-Respirable-Crystalline	0.1 mg/m ³	1.5 mg/m ³	

(Note: The entire HSE table shall apply, items and values above are extracted samples only)

JC: 表の記述に関するコメントがあり。

NK: 表が削除されたので、コメント対応を行わない。

JC: 全ての危険部の分析は無理。情報提供と対象基準の明示は、発注者の役割では？

It impossible to analyse all dangerous items. Is it the role of the Employer to provide information and specify items and limits?

NK: Table 2.1.1 will be deleted. The User Guide will show the Table in which the monitoring items will be specified by the Employer in the Particular Safety Specification.

(3) Asbestos

JC: OSHA、HSE とも重視しているのでアスベストが入るのは至極当然。(HSE が重視) この上の結晶性シリカがこれ。

It is extremely natural to specify asbestos as both OSHA and HSE give special attention to them (HSE does.)

The above crystalline silica is this (incomplete sentence).

MM: 2.1.1(3)(b) Asbestos Will be reviewed for reference in the User Guide.

- (a) For the information of Project participants, asbestos causes many construction fatalities every year. Participants should be aware that it is commonly found in older buildings frequently in ceiling and floor cavities, insulation, sprayed coatings, floor tiles and composites, asbestos-cement sheets and roofing felt;

JC: This shall be deleted as it is explanation (annotation).

NK: This (3)(a) above will be shifted to User Guide.

NK: (a) and (b) will be modified as right

- (b) If after Site survey and investigation (if

(3) Asbestos

- (a) For the information of Project participants, asbestos causes many construction fatalities every year. Participants should be aware that it is commonly found in older buildings frequently in ceiling and floor cavities, insulation, sprayed coatings, floor tiles and composites, asbestos-cement sheets and roofing felt;

- (b) If after Site survey and investigation (if necessary) there is a possibility that asbestos may be encountered in the Works, this shall be stated in the Bidding Documents in accordance with the requirements of JSSS 1.19 [Hazardous Substances], and the required remedial measures shall be taken; and

- (c) The Contractor shall comply with L143 Approved Code of Practice and guidance, for Managing and Working

(3) Asbestos

- (a) When required in the Contract, the Contractor shall take measures for asbestos in accordance with the Particular Safety Specification.

- (b) When existence of asbestos is found in the Works, the Contractor shall report to the Engineer and take measures in accordance with the requirements of JSSS 1.19 [Hazardous Substances], and

- (c) If so required in the Contract or by an instruction by the Engineer, the Contractor shall comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.

<p>2.1.2 換気の悪い場所における必要な措置</p> <p>請負者は、自然換気が不十分な場所では、内燃機関を有する機械を使用してはならない。ただし、やむを得ず内燃機関を使用するときは、当該内燃機関の排気ガスによる健康障害を防止するため、十分な換気を行わな</p>	<p>with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.</p> <p>(4) Other Hazardous Substances</p> <p>The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either existing on the Site or used in the Works.</p> <p>(5) Prevention</p> <p>(a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and</p> <p>(b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowsers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE</p> <p>(a) If it is not possible to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and</p> <p>(b) For details of PPE refer to JSSS 2.9 [Personal Protective Equipment (PPE)].</p> <p>2.1.2 Poor Ventilation</p>	<p>necessary) there is a possibility that asbestos may be encountered in the Works, this shall be stated in the Bidding Documents in accordance with the requirements of JSSS 1.19 [Hazardous Substances], and the required remedial measures shall be taken; and</p> <p>(c) The Contractor shall comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.</p> <p>JC: Put "If so required in the contract or by an Instruction by the Engineer," at the beginning of (c).</p> <p>NK: Done as commented.</p> <p>(4) Other Hazardous Substances</p> <p>The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either existing on the Site or used in the Works.</p> <p>(5) Prevention</p> <p>(a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and</p> <p>(b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowsers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE</p> <p>(c) If it is not possible to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and</p> <p>JC: 「経済的に合理的な手段では不可能」といった定義が必要か reasonably impossible</p> <p>Definition is necessary such as "impossible in financial and reasonable method (reasonably impossible)".</p> <p>NK: (a) is modified as right. If it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and:</p> <p>(d) For details of PPE refer to JSSS 2.9 [Personal Protective Equipment (PPE)].</p> <p>2.1.2 Poor Ventilation</p> <p>JC: 酸素濃度の記載が抜けているので入れるようにしてください。日本語版の酸素濃度に関する記載の範囲で追記願います。 There is missing of concentration limit values of oxygen, so they shall be added as mentioned in Japanese draft JSSS.</p>	<p>(4) Other Hazardous Substances</p> <p>The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either existing on the Site or used in the Works.</p> <p>(5) Prevention</p> <p>(a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and</p> <p>(b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowsers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE</p> <p>(a) If it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and</p> <p>(b) For details of PPE refer to JSSS 2.9.1 [Personal Protective Equipment (PPE)].</p> <p>2.1.2 Poor Ventilation</p>
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<p>ければならない。→E2.1.2(4)に規定済み</p>	<ol style="list-style-type: none"> (1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation. (2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall adopt measures required by HSE and otherwise provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels. (3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9 [Personal Protective Equipment (PPE)]. (4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and prevent any emission of exhaust gases in internal areas and provide additional adequate ventilation. 	<p>MM: 2.1.2 Poor ventilation Concentration Limit value for oxygen and other gases will be inserted from the draft.</p> <p>NK: The values of HSE and Japanese JSSS are different. To make consistent of source of values for dust and oxygen, etc. (19%) will be specified in 2.1.6 (5).(1) is modified as below.</p> <ol style="list-style-type: none"> (1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation. (2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall adopt measures required by HSE and otherwise provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels. <p>JC: Delete “adopt measures required by HSE and otherwise.”</p> <p>NK: Deleted as JICA commented.</p> <ol style="list-style-type: none"> (3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9 [Personal Protective Equipment (PPE)]. (4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and prevent any emission of exhaust gases in internal areas and provide additional adequate ventilation. <p>JC: (4)は閉鎖空間で内燃機関を使う場合を想定しているので、この記述は矛盾しているのではないかと。書くのであれば、一旦廃棄したガスが再流入しないための措置ではないでしょうか。</p> <p>Does this sentence contradict because (4) is specified for assuming internal combustion engines in confined space? If specify, is measures for re-inflowed exhaust air once expelled.</p> <p>NK: Deleted “and prevent any emission of exhaust gases in internal areas”</p> <p>NK: There is an opinion to reinstate the following items provided in the Japanese version as they specify concrete safety measures necessary for the Contractor to take for works in a confined space.</p> <p>(5) The Contractor shall take the following measures to ensure the safety of workers when working in confined spaces.</p> <p>(a) Prohibit entry of any of the Contractor's Personnel and any other personnel who are not carrying and displaying an official permit issued to them by the HSO,</p> <p>(b) Set a spotter outside the workspace to constantly monitor the safety of personnel in the confined space. In</p>	<ol style="list-style-type: none"> (1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation. (2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels. (3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9 [Personal Protective Equipment (PPE)]. (4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and provide additional adequate ventilation.
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2.1.3 強烈な騒音を発生する場所等での必要な措置

請負者は、90dB 以上の騒音(強烈な騒音という)を発生する作業場所においては、請負者の要員の騒音障害防止のため次の措置を講じなければならない。→E2.1.3(2)に規定済み

- (1) OSHA Subpart D – Occupational Health and Environmental Controls § 1926.52 Occupational noise exposureの規定に従い、作業場所での騒音の程度と騒音の暴露時間に対応して請負者の要員に、本仕様書 2.10.5(3)(d)[防音保護具]に規定の保護具を使用させること。→E2.1.3(1)(2)に規定済み
- (2) 当該作業場所では耳栓その他の騒音障害防止用の保護具を使用しなければならない旨を、請負者の要員が容易に認知できる見やすい場所に掲示すること。→E2.1.3(2)(c)に規定済み

2.1.4 閉鎖空間における安全措置

各種ビット、タンク、水槽、マンホール、ダクト、PC 箱桁、下水道等の狭い作業空間あるいは小さい出入口のみを有する閉鎖空間(以下本節では「閉鎖空間」という。)における作業において、請負者は請負者の要員の酸素欠乏や有毒ガス等に対する安全確保のために、下記の措置を講じなければならない。→E2.1.4 に規定済み

- (1) 酸素濃度、硫化水素濃度、その他必要な作業環境項目について測定を行うこと。作業環境測定は作業前に毎日実施すること。→E2.1.4(1)に規定済み

2.1.3 Noise

- (1) Standards

By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart D—Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

- (2) Preventive Measures

To prevent noise damage to Contractor’s Personnel, which may occur when noise levels exceed 90 dB (referred to as “intense noise” in JSSS), the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls

addition, a liaison shall be appointed among the personnel working in the workspace and a method for communicating with external spotter shall be established, (c) Establish an emergency rescue system and create a rescue operation procedure. Prepare respiratory protective equipment such as a respirator for rescue operations, (d) If an emergency occurs and rescue is required, prohibit any personnel to engage in rescue activities other than those instructed to do so in order to prevent secondary accident, (e) Conduct education and training on the safety measures to all Contractor’s Personnel that are required to work in confined spaces

Although, in JSSS 2.1.4 Confined Spaces (3) Work Environment and (4) Hazardous Substances, JSSS 1.19 Dangerous Works and 2.3 Prohibition of entry – Dangerous Work are referred, however they are quite abstract as for the confined space works to avoid accident.

NK: considers if there is special clause for confined spaces, they should be specified. This Chapter 2 is general requirement, therefore not reinstated here.

2.1.3 Noise

- (1) Standards

By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart D—Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

- (2) Preventive Measures

To prevent noise damage to Contractor’s Personnel, which may occur when noise levels exceed 90 dB (referred to as “intense noise” in JSSS), the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls to within the levels of Table D-2 of the OSHA Standard referred to above, if at all possible;

JC: Table D-2—Permissible Noise Exposures 読み手の立場を考慮上記のとおりタイトルまで記載するようにお願いします。 Table D-2—Permissible Noise Exposures Please kindly specify title of Table as above considering easy understanding of readers.

MM: 2.1.3 Noise Table D-2 of the OSHA Standard will be included.

NK: The title and the Table are added.

2.1.3 Noise

- (1) Standards

By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart D – Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

- (2) Preventive Measures

To prevent noise damage to Contractor’s Personnel, which may occur when noise levels exceed 90 dB (referred to as “intense noise” in JSSS), the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls to within the levels of Table D-2, Permissible Noise Exposures of the OSHA Standard referred to above, if at all possible;

Table D-2: Permissible Noise Exposures

Duration per day, hours	Sound level dBA slow response	Duration per day, hours	Sound level dBA slow response
8	90	1½	102
6	92	1	105
4	95	½	110
3	97	¼ or less	115

<p>み</p> <p>(2) 上記(1)の作業環境測定の結果、2.1.6 (2)に規定の制限値に抵触する場合は、換気による作業環境を改善し、これを維持すること。→E2.1.4(3)に規定済み</p> <p>(3) 作業空間内には、入場許可を与えた要員以外は立ち入らせないこと。→規定なし。(下記参照)</p> <p>(4) 作業空間外に監視員を配置し、作業空間内の要員の安全を常時監視させること。また、作業空間内で作業する要員の中から連絡係を任命し、外部の監視員との交信方法を整備すること。→規定なし。(下記参照)</p> <p>(5) 緊急時の救出体制を確立し、救出活動の手順を作成すること。救出活動に用いられる空気呼吸器等の呼吸用保護具を常備しておくこと。異常が発生し救出が必要な場合は、救出の際の二次災害を防ぐため、指示された者以外は救出活動に従事させないこと。→規定なし。(下記参照)</p> <p>(6) 当該閉鎖空間において作業を行う場合に必要な安全措置について、当該作業員に教育訓練を行うこと。→規定なし。(下記参照)</p> <p>(7) 当該作業にかかる作業計画書・安全衛生詳細計画書に、上記(1)から(6)の内容を含めること。 →規定なし。→(3)～(7)の規定がない理由：英語版 2.1.4(4)(5)で JSSS 1.19 [Dangerous Work]及び JSSS 2.3 [Prohibition of Entry - Dangerous Work]を参照させているためであるが、1.19 の内容は閉鎖空間等に対するの具体性ではないため、(3)～(7)の規定を復活させる案もある。→(NKの方針:英文変更時に検討する。)</p>	<p>to within the levels of Table D-2 of the OSHA Standard referred to above, if at all possible;</p> <p>(b) If such controls are not possible of if they fail to reduce sound levels within the levels of Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS 2.9.52.9.5 [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard;</p> <p>(c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and</p> <p>(d) In all cases where the sound levels exceed the values shown in Table D-2, a Continuing Effective Hearing Conservation Program shall be implemented and maintained by the Contractor.</p>	<p>(b) If such controls are not possible of if they fail to reduce sound levels within the levels of Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS 2.9.5 [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard;</p> <p>JC: 英語的に正しいの？ or OSHA 原文 If such controls fail to reduce sound levels within the levels of the table,の違い？ Is this correct in English? Is this as the following original in OSHA? "If such controls fail to reduce sound levels within the levels of the table,"</p> <p>NK: Revised as right.</p> <p>(c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and</p> <p>(d) In all cases where the sound levels exceed the values shown in Table D-2, a Continuing Effective Hearing Conservation Program shall be implemented and maintained by the Contractor.</p> <p>JC: ぱっと見では caseの意味が分からないかも 表の中で継続時間毎にその最大値が決まっている前提で書いているそれが duration (case)</p> <p>Is this as the following original in OSHA?</p> <p>"If such controls fail to reduce sound levels within the levels of the table,"</p> <p>In all cases where the sound levels exceed the values shown herein, a continuing, effective hearing conservation program shall be administered.</p> <p>↑原文 ケースをうまく表現できないなら、表を載せた方がわかりやすい。 It is easy to understand to put the table in JSSS when cases are not expressed well/</p> <p>NK: The Table is included in JSSS.</p> <p>JC: 大文字定義 OSHA? a continuing, effective hearing conservation program shall be administered</p> <p>2.1.7 で具体的記載あるが、この下に続ける方が良いのでは？ 少なくとも 2.1.7 とは書くでしょう。</p> <p>NK: 2.1.7 を(3)に移し規定します。 Moved 2.1.7 to (3) in right.</p> <p>JC: いらない？ Is it necessary?</p> <p>NK: Deleted.</p>	<table border="1"> <tr> <td>2</td> <td>100</td> <td></td> <td></td> </tr> </table> <p>(b) If such controls are not possible of if they fail to reduce sound levels within the levels of Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS 2.9.5 [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard;</p> <p>(c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and</p> <p>(d) In all cases where the sound levels exceed the values shown in Table D-2, a continuing effective hearing conservation program specified in (3) below shall be implemented.</p> <p>(3) Hearing Conservation Program</p> <p>(a) The Contractor shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in order to accurately identify any Contractor's Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8-hour time-weighted average.</p> <p>(b) The Contractor must monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. The Contractor shall choose the monitoring method that best suits each individual situation.</p>	2	100		
2	100						

<p>2.1.6 作業環境の把握</p> <p>(1) 請負者は、適切な作業環境を確保するため、下記の項目について、必要に応じ随時モニタリングを実施しなければならない。→E2.1.6(1)に規定済み</p> <p>(a) 土石、岩石、鉱物、セメント等の粉じんが、著しく発生する作業場での粉じん→E2.1.6(3)(b)に規定済み</p> <p>(a) 強烈な騒音を発生する作業場所における騒音→E2.1.6(3)(c)に規定済み</p> <p>(b) 坑内及び地下室、地下掘削等の地下空間における作業場の通気量、気温、炭酸ガス、酸素濃度又は硫化水素濃度→E2.1.6(3)(d)に規定済み</p> <p>(c) 閉鎖空間での、酸素濃度又は硫化水素濃度→E2.1.6(3)(d)に規定済み</p> <p>(d) 高温多湿な作業場所における温度及び湿度→E2.1.6(3)(d)に規定済み</p> <p>(e) 作業場所及び通路における照度→E2.1.6(3)(e)に規定済み</p> <p>なお、当該国の法律に定められた環境調査及び本契約で別途に定めがある環境影響モニタリングとは別に、上記のモニタリングを実施しなければならない。→E2.1.6(4)に規定済み</p> <p>(2) 以下(a)~(d)が該当する場合は、本仕様書 2.1.4[閉鎖空間における安全措置]及び 2.3[立入禁止の措置]における求められる措置を取らなければならない。→E2.1.6(5)に規定済み</p> <p>(b) 酸素濃度:19.5%未満または23.5%を超える場合→規定なし→(2.1.6(5)に追記)</p> <p>(f) 硫化水素濃度:10ppmを超える場合→規定なし(2.1.6(5)に追記) 可燃性のガス、蒸気の濃度:可燃下限値の10%を超える場合→E2.1.6(5)(b)に規定済み</p> <p>(g) 炭酸ガス(二酸化炭素)濃度:0.5%を超える場合→規定なし→理由: 2.1.1の表 2.1.1の扱いに従うため。→(2.1.6(5)に追記)</p>	<p>2.1.4 Further Requirements for Dangerous Work</p> <p>Further to the requirements of JSSS 1.19 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, <u>including the recommendations of OSHA</u> and for this purpose the Contractor shall:</p> <p>(1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, <u>trade effluent</u> and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work.</p> <p>(2) Safely isolate the supply and flow of any chemical or other potentially harmful and materials, gases and chemicals during the period of any work and safely reconnect or continue same after the work is finished.</p>	<p>2.1.4 Further Requirements for Dangerous Work</p> <p>Further to the requirements of JSSS 1.19 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, <u>including the recommendations of OSHA</u> and for this purpose the Contractor shall:</p> <p>JC: OSHA や HSE に General な形で飛ばさないようにできればと思います (requirement が高くなってしまふので)</p> <p>Please not directly specify to follow OSHA/HSE in general because requirements level will become higher than JICA expected.</p> <p>NK: Understood. Specific clauses will be specified.</p> <p>(1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, <u>trade effluent</u> and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work.</p> <p>JC: これは工場廃水? ってここに関係する? Is it effluent from factories? Is it related with the construction?</p> <p>MM: 2.1.4 (1) "trade effluent" "trade effluent" is encountered on drainage upgrading projects so is better left in.</p> <p>NK: Left as it is.</p> <p>(2) Safely isolate the supply and flow of any chemical or other potentially harmful materials and gases in the Site during the period of any work and safely reconnect or continue the same after the work is finished.</p> <p>JC: 間違っていないけど、文章に意味がない印象 (翻訳文のままだから?) →状況が分かりません。non-native に分かるように書いてください。</p> <p>It is not incorrect but its impression is little meaning (due to direct translation?). → Cannot understand situation. Please write for non-native to be able to understand.</p> <p>NK: This is specified by MD (not NK) considering the renovation works for such as water treatment/swedge facilities which has chemical, harmful materials, gases. The meaning of the sentence is, temporarily changing the flow and restoring it after completion of the work. NK ask MD to rewrite considering JICA comment</p>	<p>2.1.4 Further Requirements for Dangerous Work</p> <p>Further to the requirements of JSSS 1.19 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, and for this purpose the Contractor shall:</p> <p>(1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, <u>trade effluent</u> and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work.</p> <p>(2) Safely isolate the supply and flow of any chemical or other potentially harmful materials and gases in the Site during the period of any work and safely reconnect or continue the same after the work is finished.</p>
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<p>2.1.5 高温多湿な作業環境下での必要な措置</p> <p>請負者は、高温多湿な作業環境での作業員の健康障害の防止のため、下記の措置を講じなければならない。→E2.1.5に規定済み</p> <p>(1) 作業環境の改善</p> <p>(h) 屋外の高温多湿な作業場所においては、直射日光並びに周囲の壁面及び地面からの照り返しを遮ることができる簡易な施設を適所に設けること。→E2.1.5(1)(a)に規定済み</p> <p>(i) 屋内の作業場所では、熱源からの熱に対して遮蔽物を設けること、及び適度な通風を確保すること、又は冷房設備を設けること。→E2.1.5(1)(b)に規定済み</p> <p>(j) 作業場所には飲料水及び塩分補給を可能にするものを備え付けること。→E2.1.5(1)(d)に規定済み</p> <p>(k) 体調不良を起こした者を回復させることを目的として、作業場所の近隣に冷房設備を備えた休憩所又は日陰等の涼しい休憩所を設けること。かかる施設には体調不良者が横臥できるように設備を設けること。→E2.1.5(1)(e)に規定済み</p> <p>(2) 作業上の措置</p> <p>(a) 作業の休止および休憩時間を確保し、連続する作業時間を短縮すること。→E2.1.5(1)(f)に規定済み</p> <p>(l) 必要に応じて計画的に暑さへの順化期間を設けること。→E2.1.5(1)(g)に規定済み</p> <p>(m) 作業前後及び作業中の水分、塩分の摂取及び透湿性や通気性の良い服装の着用等を指導し、適宜巡視して、不適切な状況が認められたときは直ちに是正する等の適切な措置を講ずること。→E2.1.5(2)(3)に規定済み</p>	<p>(3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [General Safety Measures].</p> <p>(4) For further information on the removal and disposal of Hazardous Substances refer to JSSS 1.19 [Dangerous Work].</p> <p>(5) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [Prohibition of Entry - Dangerous Work].</p> <p>2.1.5 High and Low Temperatures and Humidity</p> <p>(1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by:</p> <p>(a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground;</p> <p>(b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working;</p> <p>(c) Where permitted by the Engineer, carrying out work during the night when temperatures and humidity are lower;</p> <p>(d) Providing drinking water and supplement that allow salt replenishment at work place;</p> <p>(e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover;</p>	<p>(3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [General Safety Measures].</p> <p>(4) For further information on the removal and disposal of Hazardous Substances refer to JSSS 1.19 [Dangerous Work].</p> <p>JC: 書いてる? →参照先に関連の記載が殆どないので削除。冒頭文と循環しているのも問題。 Described? → Deleted because there is no much related descriptions in the referred clause. It is problem that the opening sentence of 2.1.4 and the (4) are circulated.</p> <p>NK: Deleted as commented.</p> <p>(5) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [Prohibition of Entry - Dangerous Work].</p> <p>2.1.5 High and Low Temperatures and Humidity</p> <p>(1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by:</p> <p>(a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground;</p> <p>(b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working;</p> <p>(c) Where permitted by the Engineer under the hot climate carrying out work during the night when temperatures and humidity are lower;</p> <p>JC: hot な場合の条件の記載がなかったため追記しました。 Added conditions of hot as it was not mentioned</p> <p>NK: Added as commented.</p> <p>(d) Providing drinking water and supplement that allow salt replenishment at work place;</p> <p>(e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover;</p>	<p>(3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [General Safety Measures].</p> <p>(4) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [Prohibition of Entry - Dangerous Work].</p> <p>2.1.5 High and Low Temperatures and Humidity</p> <p>(1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by:</p> <p>(a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground;</p> <p>(b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working;</p> <p>(c) Where permitted by the Engineer under the hot climate carrying out work during the night when temperatures and humidity are lower;</p> <p>(d) Providing drinking water and supplement that allow salt replenishment at work place;</p> <p>(e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover;</p> <p>(f) Allowing work breaks and reducing excessive and continuous working times; and</p>
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<p>(n) 作業中に健康状態の異常が認められた要員については、休ませる等の必要な措置をとること。→E2.1.5(5)に規定済み</p>	<p>(f) Allowing work breaks and reducing excessive and continuous working times; and</p> <p>(g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold.</p> <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p> <p>2.1.6 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.29 [Safety Reports].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <p>(a) The pre-existent conditions for all periods of Dangerous Work;</p> <p>(b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated;</p> <p>(c) Noise levels at work places that generate intense noise;</p> <p>(d) Ventilation volume, temperature and concentration of carbon dioxide,</p>	<p>(f) Allowing work breaks and reducing excessive and continuous working times; and</p> <p>(g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold.</p> <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p> <p>2.1.6 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.29 [Safety Reports].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <p>(a) The pre-existent conditions for all periods of Dangerous Work;</p> <p>(b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated;</p> <p>(c) Noise levels at work places that generate intense noise;</p>	<p>(g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold.</p> <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p> <p>2.1.6 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.29 [Safety Reports].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <p>(a) The pre-existent conditions for all periods of Dangerous Work;</p> <p>(b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated;</p> <p>(c) Noise levels at work places that generate intense noise;</p> <p>(d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide,</p>
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	<p>carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.1. [Dangerous Work], JSSS 2.1.4 [Further Requirements for Dangerous Work] and JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>(a) Carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, hydrogen sulphide, oxygen, and similarly dangerous gases, chemicals and materials, in excess of the values indicated in JSSS Table 2.1.1: [List of Approved Workplace Exposure Limits (WELs)].</p> <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p> <p>2.1.7 Hearing Conservation Program</p> <p>(1) Contractor's shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in a way that accurately identify any Contractor's Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8-hour time-weighted average.</p> <p>(2) The Contractor must monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB</p>	<p>(d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.1. [Dangerous Work], JSSS 2.1.4 [Further Requirements for Dangerous Work] and JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>(a) Carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, hydrogen sulphide, oxygen, and similarly dangerous gases, chemicals and materials, in excess of the values indicated in JSSS Table 2.1.1: [List of Approved Workplace Exposure Limits (WELs)].</p> <p>JC: JICA: Please modify this sentence because the Table 2.1.1 is commented to delete.</p> <p>NK: (5)(a) is modified as right. (1) Oxygen of 19.5% in OSHA is revised to 19.0% as specified in EH40/2005 Workplace Exposure Limits by HSE to make consistent.</p> <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p> <p>2.1.7 Hearing Conservation Program</p> <p>(1) The Contractor shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in order to accurately identify any Contractor's Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8 hour time weighted average.</p> <p>(2) The Contractor must monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure measurement must</p>	<p>other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.1. [Dangerous Work], JSSS 2.1.4 [Further Requirements for Dangerous Work] and JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>(a) Values of limits of measurement items:</p> <p>(i) Oxygen concentration less than 19.0% and more than 23.5%.</p> <p>(ii) Hydrogen sulphide concentration more than 10 ppm (short-term exposure limit) or 5 ppm (long term exposure limit);</p> <p>(iii) Carbon dioxide concentration more than 15,000 ppm (short-term exposure limit) or 5,000 ppm (long term exposure limit);</p> <p>(iv) Values of limits given in EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1, for the monitoring items specified in the Particular Safety Specification.</p> <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p>
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	<p>range and must be taken during a typical work situation. This requirement is performance oriented because it allows Contractors to choose the monitoring method that best suits each individual situation.</p>	<p>include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. The Contractor shall choose the monitoring method that best suits each individual situation.</p> <p>JC: 場所がおかし、Noise のパートに続ければ良いと考えますので再検討ください。Please review this because it is considered this shall be continued after the part of Noise. NK: Moved to 2.1.3 (3).</p>	
<p>2.2 工事現場周辺の危害防止</p> <p>請負者は、工事現場周辺における第三者への危害防止のために、下記の措置を講じなければならない。→ E2.2.1(a)に規定済み</p> <p>2.2.1 工事区域の立入防止施設</p>	<p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1.General</p> <ol style="list-style-type: none"> (1) The Contractor is reminded of his obligations under GC 4.8 [Safety Procedures] and GC 4.22 [Security of the Site] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site. (2) Unauthorised persons in this context shall mean persons who should not be on the Site. (3) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site. (4) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary request their assistance to remove any trespassers from the Site. (5) Such measures shall include (but are not restricted to) the following requirements of this Section. <p>2.2.2. Secure Site Perimeter</p>	<p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1. General</p> <ol style="list-style-type: none"> (1) The Contractor is reminded of his obligations under GC 4.8 [Safety Procedures] and GC 4.22 [Security of the Site] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site. (2) Unauthorised persons in this context shall mean persons who should not be on the Site. JC: 解説のため不要。As this (2) is definition, so deleted. NK: Deleted. (3) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site. (4) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary request their assistance to remove any trespassers from the Site. (5) Such measures shall include (but are not restricted to) the following requirements of this Section. <p>2.2.2. Secure Working Area Perimeter</p> <p>JC: Site であっても工事をしていなければ除外するべきだし、Site でなくても工事をしていれば遵守する、そういう意味では working area の方が適切。 The place in the Site where no work is done shall be excluded and place where work is done though it is not in</p>	<p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1.General</p> <ol style="list-style-type: none"> (1) The Contractor is reminded of his obligations under GC 4.8 [Safety Procedures] and GC 4.22 [Security of the Site] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site. (2) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site. (3) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary request their assistance to remove any trespassers from the Site. (4) Such measures shall include (but are not restricted to) the following requirements of this Section. <p>2.2.2. Secure Site Perimeter</p>

<p>請負者は第三者立入禁止の場所、工事現場の周囲及び危険箇所に、柵・仮囲い等の立入り防止施設を設置することにより、請負者の要員及び第三者に対して工事区域を明確にするため、以下の措置を取らなければならない。→E2.2.1(1)(a)に規定済み</p> <p>(1) 立入防止施設は、損傷・腐食等のない材料のものとし、第三者(特に子供)が容易に侵入できないような構造とすること。→E2.2.1(2)に規定済み(内容は少々異なっている)</p> <p>(2) 立入防止施設、工事看板、照明器具等の保守管理を行うこと。→E2.2.1(d)に規定済み</p> <p>(3) 立入防止施設に設けた出入口は、施錠できるようにすること。→E2.2.1(c)に規定済み</p> <p>(4) 道路に近接して掘削等により開口している箇所がある場合には、蓋をするか防護柵を設置して転落防止措置を講じること。→E2.2.2(4)に規定済み</p> <p>(5) 柵・仮囲いの高さ、長さ及び仕様は、本仕様書 Annex X の規定に従うこと。→E2.2.2(3)に規定済み</p>	<p>(1) Unless otherwise stated in the Contract, the Contractor shall:</p> <p>(a) Enclose the perimeter of the Site with secure fencing to prevent access to the Site by unauthorised persons;</p> <p>(b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas;</p> <p>(c) Provide secure entry points with lockable gates or barrier; and</p> <p>(d) Provide and maintain signs clearly advising/warning against entry.</p> <p>(2) Unless otherwise specified in the Contract, Site perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.</p>	<p>the site. Shall be included in places to follow the requirements. Therefore “working area” is suitable for this Clause.</p> <p>MM: 2.2.2 Secure Site Perimeter Secure Working Area Perimeter is specified in JSSS 2.3 Prohibition of Entry - Dangerous Work, the title of 2.2.2 will be left as it is.</p> <p>The Site perimeter fencing will be described in the User Guide and Particular Safety Specification stating requirements when the Site is of long perimeter such as railway or road project.</p> <p>NK: The title is as it is.</p> <p>(1) Unless otherwise stated in the Contract, the Contractor shall:</p> <p>JC: 日本語の 2.2.1 に記述したような原則として守らねばならないことを、きちんと記述してください。そのうえで仕様書に具体的な使用を Annex に記載するよう規定してください。As described in Japanese 2.2.1, please clearly specify requirements in principle and specify concrete requirements in Annex.</p> <p>NK: Japanese version specified as follows: (1) establish the construction area as specified in the Contract by installing temporary fences, enclosures and other entry prevention facilities at places such as where entry by third-party is prohibited, around construction sites and at dangerous places,</p> <p>NK: The description will be modified as right following the comments:</p> <p>(a) Enclose the perimeter of the Site with secure fencing to prevent access to the Site by unauthorised persons;</p> <p>(b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas;</p> <p>JC: throughout the execution of the Worksの方が適切なので修正。他の箇所でも同じ記載があれば同様に統一願います。“throughout the execution of the Works” is more suitable wording. Please change if there are other part with same expression.</p> <p>NK: This has been discussed and concluded to use “the Time for Completion” as it is contractually defined word.</p> <p>(c) Provide secure entry points with lockable gates or barrier; and</p> <p>(d) Provide and maintain signs clearly advising/warning against entry.</p> <p>(2) Unless otherwise specified in the Contract, Site perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.</p>	<p>The Contractor shall secure the perimeter of the Site to prevent access to the Site by unauthorised persons as specified below unless otherwise stated in the Particular Safety Specification.</p> <p>(1) Fencing</p> <p>(a) Enclose the perimeter of the Site with secure fencing;</p> <p>(b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas;</p> <p>(c) Provide secure entry points with lockable gates or barrier; and</p> <p>(d) Provide and maintain signs clearly advising/warning against entry.</p> <p>(2) Site perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.</p>
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<p>2.2.2 道路占用時の措置</p> <p>請負者は、工事のために道路を占用する場合には、発注者による関係当局との事前調整結果に基づき、当該道路での安全で円滑な交通を確保するため、次の措置を講じなければならない。→E2.2.3(1)に規定済み</p> <p>(1) 道路占用に先立ち、道路占用計画を作成し関係当局から必要な許可をとること。→E2.2.3(1)(a)に規定済み</p> <p>(2) 道路の交通止め、もしくは通行制限が必要な場合には、実施前に関係当局の承認と必要な許可を得ること。→E2.2.3(1)(b)に規定済み</p> <p>(3) 道路占用の全期間を通じて、道路での安全で円滑な交通を、妨げないように配慮すること。→2.2.3(1)(c)に規定済み</p> <p>(4) 看板、標識、バリケードその他立入防止施設は、使用が許可されたものを設置し、これら設備の点検、保守及び撤去を行うこと。→規定なし。理由：規定しない理由は記されていないが、2.1.4(2)と重複するからであると思われる。→(NKの方針：このまま規定なしとする。)</p> <p>(5) 夜間照明、保安灯は、常に点検を行い、保守管理を行うこと。→規定なし。理由：上記(4)と同様。→(NKの方針：このまま規定なしとする。)</p>	<p>(3) Full details of Site perimeter fencing including scope, dimensions and specifications shall be given in the Technical Specification of the Bidding Documents in accordance with Annex 1.3: [Required Amendments to "JICA Standard Bidding Documents"].</p> <p>(4) The Contractor shall provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations outside the Site perimeter.</p> <p>2.2.3. Measures for Road Occupation</p> <p>(1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:</p>	<p>(3) For full details of working area perimeter fencing including scope, dimensions and specifications, the contractor shall refer to the relevant part of the Technical Specification as indicated in Annex **.</p> <p>(4) Full details of Site perimeter fencing including scope, dimensions and specifications shall be given in</p> <p>JC: 何で工事区域の外に掘っているのか？ 道路に近接して掘削等により開口している箇所がある場合には、蓋をするか防護柵を設置して転落防止措置を講じること。2.2.3(d)に同じこと書いてある。→perimeterの話ではないので削除してください。</p> <p>Please delete (4) because this is not for perimeter and 2.2.3(d) specified same.</p> <p>NK Deleted.</p> <p>2.2.3. Measures for Road Occupation</p> <p>(1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:</p> <p>JC: 公的機関との調整 legally constituted public authorities と同じ？→他章と表現ぶりの統一が必要であり確認願います。</p> <p>Coordination of public authorities. Is this same as legally constituted public authorities. →Please confirm and use consistent term.</p> <p>NK: Chapter 1, 3 uses as follows:</p> <p>1.24.7 The emergency contact (2) Relevant government authorities and agencies, administrative agencies, police stations, ambulance and fire stations, and the like.</p> <p>1.25.2 Members of the Contractor's Safety Committee shall include: (8) (If necessary) Representatives of the relevant government authorities and agencies.</p> <p>Engineer of a copy of this certificate.</p> <p>1.37.8. UXO notify the Engineer and relevant authorities. Work shall resume when the Contractor has received instructions from the Engineer and relevant authorities.</p> <p>Annex 1.2: Content of Safety Plan at Bid Stage (13) Safety Information Sharing and Communications Policy between the Contractor and Employer, Engineer and relevant government agencies, etc</p> <p>3.1. UNDERGROUND AND CONCEALED SERVICES</p>	<p>(3) Full details of Site perimeter fencing including scope, dimensions and specifications shall be referred to the Particular Safety Specification.</p> <p>2.2.3.Measures for Road Occupation</p> <p>(1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:</p>
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	<p>(a) Prepare a road usage plan and submit it to the relevant authorities, and obtain necessary permits, prior to road use;</p> <p>(b) Obtain the approval of the relevant authorities and obtain the necessary permits before any road closure, diversion or other traffic restrictions are applied;</p> <p>(c) Take necessary measures to limit any restrictions to safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(e) Remove Contractor's Equipment during non-working periods (e.g. night time and weekends), store safely away from the works, provide temporary covers or barriers, lighting and warning signs, leave the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident; and</p> <p>(f) Comply with the traffic rules and regulations of the Country.</p> <p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [Spotters and Flagmen]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p>	<p>3.1.1. Generally (4) If any of these Underground or Concealed Services are the property of <u>a legally constituted public authority or a third party.</u></p> <p>4.3.2 Transportation to and Removal from Site (1) When transporting obtain all necessary prior permission from <u>the relevant authorities</u> including police, <u>road authority</u> before commencement of transportation</p> <p>NK: This Clause will be applied to works in roads owned by both public and private owners, therefore relevant authority is used tentatively NK will request MD to determine the terms and consistently use it in JSSS.</p> <p>(a) Prepare a road usage plan and submit it to the engineer and the relevant authorities, and obtain necessary permits, prior to road use;</p> <p>(b) <u>Obtain the approval of the relevant authorities and obtain the necessary permits</u> before any road closure, diversion or other traffic restrictions are applied;</p> <p>JC: 同じ内容を繰り返しているようなので、修正願います。It seems same content is repeated. Please revise it. (b)</p> <p>NK: Revised as right.</p> <p>(c) Take necessary measures to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(e) Remove Contractor's Equipment during non-working periods (e.g. night time and weekends), store safely away from the works, provide temporary covers or barriers, lighting and warning signs, leave the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident; and</p> <p>JC: working area が secure されている前提なので、そこに equipment が残っていること自体は問題ないと考える。 On the premise that the working area is secured, therefore it is not problem/issues for the equipment is left there.</p> <p>MM: 2.2.3 Measures for Road Occupation (e) "Remove Contractor's Equipment..." To be reviewed, clarified and left ii for now, it will be discussed again.</p> <p>NK: Added as the right.</p> <p>(f) Comply with the traffic rules and regulations of the Country.</p> <p>NK: (f) is specified in Chapter 1 1.4 JSSS – Laws, therefore,</p>	<p>(a) Prepare a road usage plan and submit it to the engineer and the relevant authorities, and obtain necessary permits, prior to road use;</p> <p>(b) Obtain the approval <u>and necessary permits of</u> the relevant authorities before any road closure, diversion or other traffic restrictions are applied;</p> <p>(c) Take necessary measures to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(e) Remove Contractor's Equipment during non-working periods (e.g. night time and weekends), store safely away from the works, provide temporary covers or barriers, lighting and warning signs, leave the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident;</p> <p>(f) <u>In case the relevant authority approves the Contractor to store Contractor's Equipment safely during non-working periods (e.g. night time and weekends), provide temporary barriers, lighting and warning signs, keep the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident; and</u></p>
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<p>2.2.3 看板・標識の整備</p> <p>請負者は、工事現場周辺に必要な情報を明示するために次の措置を講じなければならない。→E2.2.4(1)に規定済み</p> <p>(1) 道路上に設置する工事看板、迂回路案内板等の各種標識類は、当該国の標準のものを使用し、所定の場所に交通の支障とならないよう設置し、振動や風等で壊れたり倒れたりしないようなものとし、しっかり固定すること。→E2.2.4(1)(a)(c)に規定済み</p> <p>(2) 各種標識類は、運転者及び歩行者の見やすい場所に設置すること。また、夜間において遠方から確認し得るよう照明又は反射装置を設置すること。→E2.2.4(1)(b)及び2.2.4(2)に規定済み</p> <p>(3) 各種標識類は、修繕、塗装、清掃等の保守管理を常時行う。→E2.2.4(2)に規定済み</p> <p>2.2.4 工事現場出入口付近での交通事故防止</p> <p>請負者は、工事現場出入口付近での交通事故防止のために、次の措置を講じなければならない。→E2.2.5(1)に規定済み</p> <p>(1) 工事車両の出入口には、通行車両等が接近時に出入口があることが事前に認識できる距離に警告看板を設けるとともに、出入口には、交通誘導員を適切に配置し、工事車両とともに一般車両及び歩行者に対しても必要な誘導を行うこと。→E2.2.5(1)(a)(b)に規定済み</p> <p>(2) 出入口では、歩行者及び一般交通を優先すること。→E2.2.5(2)に規定済み</p> <p>2.2.5 地域住民とのコミュニケーション</p>	<p>2.2.4. Temporary Road Signs</p> <p>(1) For disseminating necessary information on roads adjacent to the Site, the Contractor shall:</p> <p>(a) Provide standard road signs in the same colours and format as those used by the road authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs;</p> <p>(b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(2) Maintain the various signs regularly, including repairing, painting and cleaning, and ensuring that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5. Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect against accident.</p> <p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p>	<p>deleted.</p> <p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [Spotters and Flagmen]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4. Temporary Road Signs</p> <p>(1) For disseminating necessary information adjacent to the Site, the Contractor shall:</p> <p>(a) Provide standard road signs in the same colors and format as those accepted by the road authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs;</p> <p>(b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(2) Maintain the various signs regularly, including repairing, painting and cleaning and ensuring that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5. Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect them against accident.</p> <p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p>	<p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [Spotters and Flagmen]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4. Temporary Road Signs</p> <p>(1) For disseminating necessary information on roads adjacent to the Site, the Contractor shall:</p> <p>(a) Provide standard road signs in the same colours and format as those used by the road authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs;</p> <p>(b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(2) Maintain the various signs regularly, including repairing, painting and cleaning, and ensuring that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5. Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect against accident.</p> <p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p>
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<p>請負者は、工事現場周辺の地域住民とのコミュニケーションを図るために、次の措置を講じなければならない。→E2.2.6(1)に規定済み</p> <p>(1) 工事着手前に、周辺住民への工事概要の周知に関して発注者に協力すること→E2.2.6(1)(a)に規定済み</p> <p>(2) 工事場所が学校施設近辺にある場合には、請負者は、本契約で別途定めるところに従い、近隣住民に対して交通安全にかかわる啓蒙活動を行うとともに、請負者の要員に対して特に登下校時の工事車両の通行に関するルール・留意事項を周知すること。→E2.2.6(1)(b)及び2.2.6(2)に規定済み</p> <p>(3) 工事中に周辺住民等から、請負者に対する苦情又は要望があったときは、請負者はエンジニアに直ちに報告すること。→E2.2.6(3)に規定済み</p>	<p>2.2.6. Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community before commencing construction; and</p> <p>(b) Conduct traffic safety and awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>	<p>2.2.6. Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community before commencing construction; and</p> <p>(b) If so required in the Technical Specifications, conduct traffic safety and awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>	<p>2.2.6. Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community; and</p> <p>(b) If so required in the Particular Safety Specification, conduct traffic safety and awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>
<p>2.3 立入禁止の措置</p> <p>(1) 請負者は、当該作業に従事する者及び立入りを許可された者以外の下記の場所への立入りを禁止し、見やすい箇所に具体的な危険の内容と共にその旨を標示しなければならない。→E2.3.1(2)及び2.3.2(1)に規定済み</p> <p>(a) 当該作業者が十分に注意を払いながら、危険な作業を行っている場所→そのままの規定はないが、2.3.3の内容と重複する部分が多い。下記2.3(2)(a)～(f)参照。→(NKの方針:このまま規定なしとする。)</p> <p>(c) 当該作業者以外の者が立入ると、作業をしている者に危険が生じるおそれのある場所→E2.3.3(4)に規定済み</p> <p>(2) 請負者は、保護具の装備をしないで立ち入ると健康等に支障がある下記のような有害な作業箇所には、事前に作業許可を与えた請負者の要員以外の者を立ち入らせないようにするとともに、必要に応じ立入防止施設(柵、仮囲い等)または監視人を配置しなければならない。→E2.3.2(1)(2)に規定済み</p> <p>(a) 多量の高熱物体を取り扱う場所又は著しく暑熱な場所→E2.3.3(5)に規定済み</p> <p>(p) 多量の低温物体を取り扱う場所又は著しく寒冷な場所→E2.3.3(5)に規定済み</p> <p>(q) 有害な光線又は超音波にさらされる場所→E2.3.3(6)に規定済み</p>	<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1. General</p> <p>(1) For general requirements of Dangerous work refer to JSSS 1.19 [Dangerous Work].</p> <p>(2) The Contractor shall prohibit non-authorized Contractor's Personnel, non-authorized Employer's Personnel or and any other non-authorized persons from entering areas where Dangerous Work (as defined in JSSS Annex 1.1 [Definitions and Abbreviations]) is being undertaken.</p> <p>(3) Non-authorized personnel in this context shall mean Contractor's Personnel, Employer's Personnel or any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official "permit to enter" issued to them by the HSO.</p>	<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1. General</p> <p>(1) For general requirements of Dangerous work refer to JSSS 1.19 [Dangerous Work].</p> <p>(2) The Contractor shall prohibit non-authorized personnel from entering areas where Dangerous Work is being undertaken.</p> <p>(3) Non-authorized personnel in this context shall mean Contractor's Personnel, Employer's Personnel or any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official "permit to work" issued to them by the HSO.</p> <p>IC: (1)とすべき(順番がおかしい)(3)(2)(1)の順番に変更してください。: Please change order as (3)(2)(1) as the order of (3) is strange.</p> <p>MM: 2.3.1 General (3) "Permit to enter (work)" NK will prepare a list of permits required with agreed names and any requirements and will then draft a clause requiring the Contractor to prepare a "Permit to Work" system.</p> <p>NK: The order is changed. Added (4) regarding <u>permits to work</u> as right.</p>	<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1.General</p> <p>(1) Non-authorized personnel in this context shall mean Contractor's Personnel, Employer's Personnel or any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official "permit to work" issued to them by the HSO.</p> <p>(2) The Contractor shall prohibit non-authorized personnel from entering areas where Dangerous Work is being undertaken.</p> <p>(3) For general requirements of Dangerous work refer to JSSS 1.19 [Dangerous Work].</p> <p>(4) The Contractor shall prepare permits to work according to characteristics of the Dangerous Work referring to the requirements of OSHA Subpart AA-Confined Spaces in Construction, § 1926.1204 Permit-required confined space program, § 1926.1205 Permitting process, and § 1926.1206 Entry permit.</p>

<p>(r) 酸素濃度、硫化水素濃度及び炭酸ガス濃度が2.1.6(作業環境の把握)に規定する基準に抵触する場所、→E2.3.3(7)に規定済み</p> <p>(s) ガス、蒸気又は粉じんを発散する有害な場所→E2.3.3(7)に規定済み</p> <p>(t) 有害物を取り扱う場所→E2.3.3(7)に規定済み</p> <p>(3) 請負者は、下記のような場所への立入りを禁止し、見やすい箇所に具体的な理由と共にその旨を標示するとともに、立入防止施設(柵、仮囲い等)または監視人を配置しなければならない。→E2.3.1(2)及び2.3.2(1)に規定済み</p> <p>(b) 一時的に作業が行われない場所(仮設構造物を含む)で、立ち入った者に危険が及ぶ恐れのあるもの→E2.3.3(8)に規定済み</p> <p>(u) 工事中に地雷、不発弾、有毒ガス等の危険物の存在が確認された場所→E2.3.3(1)に規定済み</p> <p>(v) その他、一時的に立入禁止とすることが必要となる事由が発生した場所→規定はない。但し、2.3.3(3)(9)(10)に具体的に場所を規定している。→(NKの方針: ここには規定なしとする。)</p>	<p>2.3.2. Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of non-authorized personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>2.3.3. Further Definition</p> <p>For clarity Dangerous Work is understood also to include for example:</p> <p>(1) The detection, safe removal and disposal of Unexploded Ordnance as referred to in JSSS 1.36 [Unexploded Ordnance].</p> <p>(2) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals, gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p> <p>(3) Welding work, hot cutting work or demolition work.</p> <p>(4) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorized personnel enter.</p> <p>(5) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold</p>	<p>2.3.2. Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of non-authorized personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>JC: 外に配置して、作業員のモニターするのは無理では？ outside the working area 条件は(1)に、(1)とは誘導のための spotter を配置するのかと。ここまでは Flagman で良いのでは(次からまとめている)</p> <p>Is it possible to monitor the personnel placing spotter outside the working area?</p> <p>The clause (1) is to place a spotter to guide. Flagmen may be more suitable for this task. (After this, these two are combined or mixed up.”</p> <p>NK: Spotter is defined as both Spotter and Flagman in 2.4.1. The Spotter does not monitor inside but prevent the entry of non-authorized personnel at “outside of the working area”. No change is made.</p> <p>2.3.3. Further Definition Example of Dangerous Work</p> <p>JC: 事例を書いているだけなので example of dangerous work などのタイトルの方が良い。</p> <p>As it describes only examples, it is better to put title such as “example of dangerous work”.</p> <p>NK: Modified as commented.</p> <p>For clarity Dangerous Work is understood also to include for example:</p> <p>MM: 2.3.3 Further Definitions of Dangerous Work (Example of Dangerous Work)</p> <p>The original items (1) to (10) will be left as they are. The (1) “unexploded ordnance” will be further considered.</p> <p>NK: (2) to (10) are left as they are.</p> <p>(1) The detection, safe removal and disposal of Unexploded Ordnance as referred to in JSSS 1.36 [Unexploded Ordnance].</p> <p>JC: 不発弾の処理をコントラクターが行うことはしない。The Contractor never handle unexploded ordnance himself.</p> <p>NK: (1) is deleted.</p> <p>(2) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals,</p>	<p>2.3.2. Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of non-authorized personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>2.3.3. Example of Dangerous Work</p> <p>For clarity Dangerous Work is understood also to include the following for example:</p> <p>(1) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals,</p>
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	<p>(6) Work in areas where there is potential exposure to harmful radiation or ultrasound.</p> <p>(7) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment].</p> <p>(8) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.</p> <p>(9) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.</p> <p>(10) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.</p>	<p>gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p> <p>(3) Welding work, hot cutting work or demolition work.</p> <p>(4) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter.</p> <p>(5) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold.</p> <p>(6) Work in areas where there is potential exposure to harmful radiation or ultrasound.</p> <p>(7) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment].</p> <p>(8) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.</p> <p>(9) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.</p> <p>JC: そもそもそういう環境の下で工事をする設定にはならず、環境を整えるのは発注者の責務。Any work shall not be arranged to execute under such circumstances. It is the Employer's responsibility to prepare</p> <p>NK: MM recorded to leave as it is, so it is left now.</p> <p>(10) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.</p>	<p>gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p> <p>(2) Welding work, hot cutting work or demolition work.</p> <p>(3) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter.</p> <p>(4) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold</p> <p>(5) Work in areas where there is potential exposure to harmful radiation or ultrasound.</p> <p>(6) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment].</p> <p>(7) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.</p> <p>(8) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.</p> <p>(9) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.</p>
<p>2.4 監視員、誘導員の配置</p> <p>2.4.1 監視員、誘導員の配置</p> <p>(1) 請負者は、作業員の危険防止又は機械の安全な運行、使用のために現場の状況、作業の方法に応じて、適宜監視員、誘導員を配置しなければならない。→E2.4.3(1)に規定済み</p> <p>(2) 請負者は、監視員、誘導員に対して、現場状況、危険防止について十分周知し、監視・誘導の作業内容を指示しなければならない。→E2.4.3(2)に規定済み</p> <p>2.4.2 合図の統一</p> <p>(1) 請負者は、作業員と監視員・誘導員との間で、すみやかに有効な情報伝達を行うための合図を定め</p>	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>Spotter and Flagman are defined in JSSS Annex 1.1 [Definitions and Abbreviations].</p> <p>In accordance with the definition, a reference to either person in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p>	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>Spotter and Flagman are defined in JSSS Annex 1.1 [Definitions and Abbreviations].</p> <p>In accordance with the definition provided in JSSS Annex 1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p> <p>JC: Modified.</p>	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>In accordance with the definition provided in JSSS Annex 1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p>

<p>なければならぬ。請負者は、請負者の要員にこの合図に従わせなければならぬ。→E2.4.5(1)(2)に規定済み</p> <p>(2) 請負者は、定められた合図を請負者の要員に、次の方法で周知しなければならない。→E2.4.5(3)に規定済み</p> <p>(a) (a) 新規に入場した請負者の要員、新規に誘導員に指名された者に対しては、当該作業に関する合図について教育すること。→E2.4.5(3)(a)に規定済み</p> <p>(b) (b) 毎日の当該作業の開始前に、定められた合図について請負者の要員に再確認をすること。→E2.4.5(3)(b)に規定済み</p> <p>(c) (c) 標準の合図を示す看板を作成し、現場内に掲示するとともに当該機械にも同様の掲示する等により周知を図ること。→E2.4.5(3)(c)に規定済み</p>	<p>2.4.2. Duties</p> <p>Duties include for example:</p> <ol style="list-style-type: none"> (1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out. (2) Giving appropriate guidance and signals during construction equipment operations to preventing the construction equipment tipping, overturning or falling. (3) Giving appropriate guidance and signals to prevent the Contractor's Personnel from being struck or pinned by construction equipment. (4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing. (5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines. (6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's Equipment is working, construction operations are proceeding, vehicles are passing or where accidents may be likely to occur. (7) Monitoring working locations and conditions and alerting relevant Contractor's Personnel if necessary. (8) Any other similar duties and assistance. <p>2.4.3. Placement</p> <ol style="list-style-type: none"> (1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed. (2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention. <p>2.4.4. Safety</p> <p>The Contractor shall:</p> <ol style="list-style-type: none"> (1) Ensure the safety of Spotters when directing vehicles or Contractor's Equipment. (2) Ensure that Spotters and drivers agree on hand signals before backing up. 	<p>2.4.2. Duties</p> <p>Duties include for example:</p> <ol style="list-style-type: none"> (1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out. (2) Giving appropriate guidance and signals during construction equipment operations to preventing the construction equipment tipping, overturning or falling. (3) Giving appropriate guidance and signals to prevent the Contractor's Personnel from being struck or pinned by construction equipment. (4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing. (5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines. (6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's Equipment is working, construction operations are proceeding, vehicles are passing or where accidents may be likely to occur. (7) Monitoring working locations and conditions and alerting relevant Contractor's Personnel if necessary. (8) Any other similar duties and assistance. <p>2.4.3. Placement</p> <ol style="list-style-type: none"> (1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed. 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(4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing. (5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines. (6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's Equipment is working, construction operations are proceeding, vehicles are passing or where accidents is likely to occur. (7) Monitoring working locations and conditions and alerting relevant Contractor's Personnel if necessary. (8) Any other similar duties and assistance. <p>2.4.3. Placement</p> <ol style="list-style-type: none"> (1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed. (2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention. <p>2.4.4. Safety</p> <p>The Contractor shall:</p> <ol style="list-style-type: none"> (1) Ensure the safety of Spotters when directing vehicles or Contractor's Equipment. (2) Ensure that Spotters and drivers agree on hand signals before reversing.
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- (3) Instruct Spotters to maintain visual contact at all times with the driver while the vehicle is reversing.
- (4) Instruct drivers to stop reversing immediately if they lose sight of the Spotter.
- (5) Not give Spotters additional duties while they are already acting as Spotters.
- (6) Instruct Spotters not to use personal mobile phones, personal headphones, or other items which could pose a distraction during spotting activities.
- (7) Provide Spotters with high-visibility clothing, especially during night operations.

2.4.5. Signals

- (1) To avoid the risk of injury to the Contractor's Personnel when operating Contractor's Equipment, the Contractor shall establish a standardised signal system and appoint a Spotter to give necessary signals to the Contractor's Personnel.
- (2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.
- (3) The Contractor shall inform and remind all Contractor's Personnel of the established standardised signal system as follows:
 - (a) By training all Contractor's Personnel including those designated as Spotters at the time they first enter the Site of the signals;
 - (b) By re-confirming with the Contractor's Personnel, the established standardised signal system in the TBM before the start of the work each day; and
 - (c) By posting signboards on Site where required showing the standard signals and sticking a smaller-sized version directly on the concerned Contractor's Equipment.

2.4.6. Qualification of Personnel

The Contractor shall ensure that all Spotters possess sufficient experience and ability and are adequately

non-native に分かるように修正願います。

JICA: Its (baking up) meaning is not clear. Reversing is mentioned in (3). Change? Please revise it for non-native to be able to understand.

NK: (2) states about "hand signals", whereas (3) emphasises the importance of "eye contact" when reversing vehicles. To change "backing up" to "reversing".

- (3) Instruct Spotters to maintain visual contact at all times with the driver while the vehicle is reversing.
- (4) Instruct drivers to stop reversing immediately if they lose sight of the Spotter.
- (5) Not give Spotters additional duties while they are already acting as Spotters.
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- (2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.
- (3) The Contractor shall inform and remind all Contractor's Personnel of the established standardised signal system as follows:
 - (a) By training all Contractor's Personnel including those designated as Spotters at the time they first enter the Site of the signals;
 - (b) By re-confirming with the Contractor's Personnel, the established standardised signal system in the TBM before the start of the work each day; and
 - (c) By posting signboards on Site where required showing the standard signals and sticking a smaller-sized version directly on the concerned Contractor's Equipment.

2.4.6. Qualification of Personnel

The Contractor shall ensure that all Spotters possess sufficient experience and ability and are adequately trained and supervised to perform their duties.

- (3) Instruct Spotters to maintain visual contact at all times with the driver while the vehicle is reversing.
- (4) Instruct drivers to stop reversing immediately if they lose sight of the Spotter.
- (5) Not give Spotters additional duties while they are already acting as Spotters.
- (6) Instruct Spotters not to use personal mobile phones, personal headphones, or other items which could pose a distraction during spotting activities.
- (7) Provide Spotters with high-visibility clothing, especially during night operations.

2.4.5. Signals

- (1) To avoid the risk of injury to the Contractor's Personnel when operating Contractor's Equipment, the Contractor shall establish a standardised signal system and appoint a Spotter to give necessary signals to the Contractor's Personnel.
- (2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.
- (3) The Contractor shall inform and remind all Contractor's Personnel of the established standardised signal system as follows:
 - (a) By training all Contractor's Personnel including those designated as Spotters at the time they first enter the Site of the signals;
 - (b) By re-confirming with the Contractor's Personnel, the established standardised signal system in the TBM before the start of the work each day; and
 - (c) By posting signboards on Site where required showing the standard signals and sticking a smaller-sized version directly on the concerned Contractor's Equipment.

2.4.6. Qualification of Personnel

The Contractor shall ensure that all Spotters possess

	<p>trained and supervised to perform their duties.</p> <p>2.4.7. Radios</p> <p>The Contractor shall provide and maintain any necessary equipment such as hand-held radios to ensure effective and safe communications and train all personnel in their use.</p> <p>2.4.8. PPE</p> <p>The Contractor shall ensure that all spotters, flagmen and signalmen are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>	<p>2.4.7. Radios Communication tools</p> <p>The Contractor shall shall provide and maintain any necessary equipment such as hand-held radios to ensure effective and safe communications and train all personnel in their use.</p> <p>JC: ここは必要に応じてという記載が正しいのでは？ Isn't it proper to mention "when necessary"?</p> <p>NK: Agreed. Added.</p> <p>JC: walky-talky はいらないでしょうか。 JICA: Isn't walky-talky necessary?</p> <p>NK: Walky-talky is more common recently and almost same as hand-held radios. Thus, "walkie-talkies" is added to "hand-held radios".</p> <p>JC: 不明瞭。明確に記載願います。 Please clearly mention this (all personnel).</p> <p>NK: In order to specify, add "assigned to Spotters".</p> <p>The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, walkie-talkies to ensure effective and safe communications and train all personnel assigned to Spotters in their use.</p> <p>2.4.8. PPE</p> <p>The Contractor shall ensure that all spotters, flagmen and signalmen Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p> <p>JC: Spotters だけの記載や、このように 3 種類の記載など、複数のパターンがあるようですので、統一願います。</p> <p>Please specify unified terms as there is different usage of "only" Spotters", and "all spotters, flagmen and signalmen".</p> <p>NK: As defined in 2.4.1 that Spotters include both Spotters and Flagman, Spotters will be consistently used.</p>	<p>sufficient experience and ability and are adequately trained and supervised to perform their duties.</p> <p>2.4.7. Radios Communication tools</p> <p>The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, walkie-talkies to ensure effective and safe communications and train all personnel assigned to Spotters in their use.</p> <p>2.4.8. PPE</p> <p>The Contractor shall ensure Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>
<p>2.5 墜落防止</p> <p>2.5.1 一般事項</p> <p>(1) 請負者は、墜落の危険がある作業を行う場合は、必要な墜落防止措置について、関連の作業計画書及び安全衛生詳細計画書に記載し、エンジニアのレビューを受けなければならない。→規定なし。 (レビューの妥当性が問題)→(NKの方針: このまま規定なしとする。)</p>	<p>2.5 FALL PREVENTION</p> <p>2.5.1. General Items</p> <p>(1) Falls are the leading cause of accident and fatality in the construction industry, accounting for more than 40% of all construction fatalities in Japan and it is emphasised therefore that particular consideration be given by the Contractor and appropriate measures selected and used to avoid this risk.</p>	<p>2.5 FALL PREVENTION</p> <p>2.5.1. General Items</p> <p>(1) Falls are the leading cause of accident and fatality in the construction industry, accounting for more than 40% of all construction fatalities in Japan and it is emphasised therefore that particular consideration be given by the Contractor and appropriate measures selected and used to avoid this risk.</p> <p>JC: 解説のため削除 Delete, because this is an explanation. MM: The (1) will be described in User Guide. User Guide and Requirements will be clearly separated. NK: Deleted.</p>	<p>2.5 FALL PREVENTION</p> <p>2.5.1. General</p>

<p>(2) 請負者は、墜落防止に関する当該国の法律及び本仕様書のいずれにも規定が無い事項は、米国 OSHA 規則 Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection を参照して、必要と判断する措置を講じなければならない。→E2.5.1(2)に規定済み。(2.5.1(2)(a)～(g)に参照先を記述している。)</p> <p>(3) 本節は通路、足場・作業床、作業床端・開口部からの墜落防止、また掘削、ロープ高所作業における墜落防止に関する事項を規定し、物体の飛来、落下による災害防止のための規定は本仕様書 2.6 [飛来落下の防止措置]、昇降設備・足場等の設備の材料、構造、設置・解体時の留意事項、点検等に関する規定は本仕様書 5.4[足場等]及び本仕様書 5.5[通路・昇降設備・栈橋]にて規定する。→E2.5.1(4)に規定済み</p> <p>2.5.2 通路からの墜落防止措置</p> <p>(1) 安全な通路の設置</p> <p>請負者は、作業場に通ずる場所及び作業場内には、作業員が使用するための安全な通路を設け、かつ、これを常時有効に保持しなければならない。また、主要な通路には、これを保持するため、通路の表示を行わなければならない。→E2.5.6(1)に規定済み</p> <p>(2) 架設通路</p> <p>請負者は、架設通路の墜落の危険のある箇所には、次に掲げる設備(丈夫な構造の設備であって、たわみが生ずるおそれがなく、かつ、著しい損傷、変形又は腐食がないものに限る)又はこれらと同等以上の機能を有する墜落防止設備を設置しなければならない。→E2.5.5(3)に規定済み</p> <p>(a) 高さ 85cm 以上の手すり→E2.5.5(1)に規定済み</p> <p>(b) 高さ 35cm 以上 50cm 以下の中棧→E2.5.5(2)に規定済み</p> <p>(3) 作業の必要上、臨時に墜落防止設備を取り外す場合の措置</p> <p>請負者は、次の措置を講じなければならない。→E2.5.6(3)に規定済み</p> <p>(a) 墜落制止用器具を安全に取り付けるための設備等を設け、かつ、作業員に墜落制止用器具を使用させる措置又はこれと同等以上の効果を有する措置を講ずること。→E2.5.6(3)(c)に規定済み</p> <p>(b) 前項の措置を講ずる箇所には、関係作業員以外の作業員を立ち入らせないこと。→E2.5.6(3)(d)に規定済み</p> <p>(c) 取り外す必要がなくなった後は、直ちにこれらの設備を原状に復すること。→E2.5.6(3)(e)に規定済み</p> <p>2.5.3 足場・作業床からの墜落防止措置</p> <p>(4) 請負者は、高さが 2m 以上の箇所(作業床の端、開</p>	<p>(2) By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements for fall prevention as specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M - Fall Protection of "Part 1926 - Safety and Health Regulations for Construction" and as follows:</p> <p>(a) Requirements relating to fall protection for employees working on scaffolds shall comply with subpart L.</p> <p>(b) Requirements relating to fall protection for employees working on cranes and derricks shall comply with subpart CC.</p> <p>(c) Fall protection requirements for employees performing steel erection work (except for towers and tanks) shall comply with subpart R.</p> <p>(d) Requirements relating to fall protection for employees working on certain types of equipment used in tunnelling operations shall comply with subpart S.</p> <p>(e) Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers shall comply with §1926.105.</p> <p>(f) Requirements relating to fall protection for employees working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment shall comply with Subpart V.</p> <p>(g) Requirements relating to fall protection for employees working on stairways and ladders are provided in subpart X.</p>	<p>(2) By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements for fall prevention as specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M - Fall Protection of "Part 1926 - Safety and Health Regulations for Construction" and as follows:</p> <p>JC: 参照して、の意より強くなってしまっているので、要修正。 This sentence become stronger than Japanese Draft which mentioned "shall refer to ..." Please revise it as Japanese draft JSSS.</p> <p>MM: 1 月の議事録では次の様に遵守することとしています。 2.5.1 General "comply with" or "refer to OSHA" The sentence of 2.5.1 will be "comply with".</p> <p>The description of when not relevant case, the Contractor can propose the Engineer alternative or waiver for approval." under JSSS 1.4.5 and 1.4.6.</p> <p>NK: Following the MM to specify "comply with", NK modified (2) and JICA sentences as (1) in right.</p> <p>(a) Requirements relating to fall protection for employees working on scaffolds shall comply with subpart L.</p> <p>JC: ・前コメントに同じ。shall comply with の表現は改めてください。As same as the above, please change "shall comply with" to "shall refer to".</p> <p>MM: As mentioned in the above MM "comply with".</p> <p>NK: NK modified as right.</p> <p>(b) Requirements relating to fall protection for employees working on cranes and derricks shall comply with subpart CC.</p> <p>(c) Fall protection requirements for employees performing steel erection work (except for towers and tanks) shall comply with subpart R.</p> <p>(d) Requirements relating to fall protection for employees working on certain types of equipment used in tunnelling operations shall comply with subpart S.</p> <p>(e) Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers shall comply with §1926.105.</p> <p>(f) Requirements relating to fall protection for employees working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment shall</p>	<p>(1) By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for fall prevention complying with those the technical requirements for fall prevention as specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M - Fall Protection of "Part 1926 - Safety and Health Regulations for Construction" and as follows:</p> <p>(a) Requirements relating to fall protection for employees workers working on scaffolds shall comply with in Subpart L - Scaffolds;</p> <p>(b) Requirements relating to fall protection for employees workers working on cranes and derricks shall comply with in Subpart CC - Cranes and Derricks in Construction;</p> <p>(c) Fall protection requirements for employees workers performing steel erection work (except for towers and tanks) shall comply with in Subpart R - Steel Erection;</p> <p>(d) Requirements relating to fall protection for employees wokers working on certain types of equipment used in tunnelling operations shall comply with in Subpart S - Underground Construction, Caissons, Cofferdams and Compressed Air;</p> <p>(e) Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers shall comply with in §1926.105 Safety nets;</p> <p>(f) Requirements relating to fall protection for employees wokers working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment shall comply with in Subpart V - Electric Power Transmission and</p>
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<p>口部等を除く。)で作業を行なう場合において墜落により作業員に危険を及ぼすおそれのあるときは、足場を組み立てる等の方法により作業床を設置しなければならない。→E2.5.8(1)に規定済み。(但し、2m 以上については 2.5.2 で規定)</p> <p>(5) 請負者は、作業床を設けることが困難なときは、墜落による作業員の危険を防止するため、次の措置を講じなければならない。→規定なし。以下(a)～(c)についても同様。本節の他の箇所で規定している内容と重複のためと考えられる。→(NK の方針: このまま規定なしとする。)</p> <p>(c) 作業員に墜落制止用器具を使用させること。</p> <p>(d) 墜落制止用器具を安全に取り付けるための設備を設けること。</p> <p>(e) 墜落制止用器具及びその取付け設備等の異常の有無について、随時点検を行うこと。</p> <p>(6) 請負者は、作業員に墜落の危険を及ぼすおそれのある箇所には、次の足場に応じて、それぞれ次に掲げる設備(丈夫な構造の設備であり、たわみが生ずるおそれがなく、かつ、著しい損傷、変形又は腐食がないものに限る。)又はこれらと同等以上の機能を有する墜落防止設備を設置しなければならない。→規定なし。以下(a)～(b)についても同様。→(NK の方針: 2.5.8 に加えて記述すべき。)</p> <p>(a) わく組足場(妻面に係る部分を除く。)</p> <p>交差筋かい及び高さ 15cm 以上 40cm 以下の棧又は高さ 15cm 以上の幅木</p> <p>(b) わく組足場以外の足場、及びわく組足場の妻面</p> <p>本仕様書 2.5.2(2)に規定する手すり及び中棧</p> <p>(7) 請負者は、作業の性質上、墜落防止設備を設けることが著しく困難な場合又は作業の必要上臨時に墜落防止設備を取り外す場合、次の措置を講じなければならない。→規定なし。以下(a)～(b)についても同様。→(NK の方針: 2.5.8 に加えて記述すべき。)</p> <p>(a) 墜落制止用器具を安全に取り付けるための設備を設け、かつ、作業員に墜落制止用器具を使用させる措置又はこれと同等以上の効果を有する措置を講ずること。</p> <p>(b) 前項の措置を講ずる箇所に、関係作業員以外の作業員を立ち入らせないこと。</p>	<p>(3) The Contractor shall develop safety procedures for personnel who are engaged in inspection, investigation, or assessment of workplace conditions prior to the actual start of construction work or after all construction work has been completed.</p> <p>(4) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(5) The Contractor must pay special attention to whether a restraint system (PFRS) or arrest (PFAS) system is required, noting the defined terms in Chapter 1 General for each of these systems.</p> <p>It is considered that “Prevention is better than cure” and as a general rule therefore, “fall restraint” is preferred over “fall arrest”.</p>	<p>comply with Subpart V.</p> <p>(g) Requirements relating to fall protection for employees working on stairways and ladders are provided in subpart X.</p> <p>(3) The Contractor shall develop safety procedures for personnel who are engaged in <u>inspection, investigation, or assessment of workplace conditions</u> prior to the actual start of construction work <u>or after all construction work has been completed</u>.</p> <p>JC: 何故 inspection 等に従事する要員のためだけにやるのでしょうか。May we know why develop safety procedure for personnel engaged only inspection, etc.</p> <p>NK: 作業場所の安全を確認する要員の安全確認手順の作成を要求しています。This is confirmation procedure to confirm the safety of the working places by personnel to confirm the site before the work. Modification is made as right to express the meaning correctly.</p> <p>JC: どういう意図? What is the intention of this sentence? (“or after all construction work has been completed” in the third line)</p> <p>NK: 作業が終わった場所の安全を、例えば型枠支保工の撤去後その場所が安全な状態にあるかを確認する意図です。This specifies to confirm the safety condition of the site after the work, for example to confirm the removal and materials of scaffolds and clearing of the site to avoid accident at the site after the work.</p> <p>(4) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(5) The Contractor must pay special attention to whether a restraint system (PFRS) or arrest (PFAS) system is required, noting the defined terms in Chapter 1 General for each of these systems.</p> <p>It is considered that “Prevention is better than cure” and as a general rule therefore, “fall restraint” is preferred over “fall arrest”.</p> <p>JC: modified below.</p> <p>As a general rule , the Contractor shall take “fall restraint” measures wherever practicable rather than “fall arrest” measures.</p> <p>NK modified as comment.</p> <p>(6) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS.</p> <p>JC: modified below.</p>	<p>Distribution; and</p> <p>(g) Requirements relating to fall protection for <u>employees wokers</u> working on stairways and ladders <u>are provided in</u> Subpart X - <u>Stairways and Ladders</u>.</p> <p>(2) The Contractor shall develop safety procedures for personnel who are engaged in inspection, investigation, or assessment <u>to confirm</u> the workplace conditions <u>for the safety of workers</u> prior to the actual start of construction work <u>or to confirm the site condition for the safety of workers</u> after all construction work has been completed.</p> <p>(3) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(4) The Contractor must pay special attention to whether a restraint system (PFRS) or arrest (PFAS) system is required, noting the defined terms in Chapter 1 General for each of these systems.</p> <p>(5) <u>As a general rule, the Contractor shall take “fall restraint” measures wherever practicable rather than “fall arrest” measures.</u></p> <p>(6) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS</p>
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	<p>(6) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS.</p> <p>2.5.2. Height Thresholds</p> <p>The threshold for fall protection in construction work is 2 m. The Contractor must provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3. Facilities for Ascending and Descending</p> <p>When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor's Personnel to safely access and descend from such work levels.</p> <p>2.5.4. Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p> <p>(1) Accordingly, and in advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk pre-assessment including checking the following and shall record the results:</p> <p>(a) Work areas and the conditions of adjacent areas;</p> <p>(b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;</p> <p>(c) Status of access leading to work areas and any anchorages; and,</p> <p>(d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.</p>	<p>JSSS Section 2.5 [<i>Fall Prevention</i>] shall be read in conjunction with respective other parts of JSSS.</p> <p>NK modified as comment.</p> <p>2.5.2. Height Thresholds</p> <p>The threshold for fall protection in construction work is 2 m. The Contractor must provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3. Facilities for Ascending and Descending</p> <p>When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor's Personnel to safely access and descend from such work levels.</p> <p>2.5.4. Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p> <p>(2) Accordingly, and in advance of the commencement of any parts of the Works, the Contractor shall carry out such <u>further risk pre-assessment</u> including checking the following and shall record the results:</p> <p>JC: 意味が分からない。普通は hazard identification では？ Cannot know the meaning (further risk pre-assessment). It may be hazard identification usually.</p> <p>NK: 2.5.4 means that risk assessment shall be made in two stages, namely in making the Safety Plan and secondly prior to the actual start of the Work. The 82) is modified as the right (for MD's review and editing.)</p> <p>(a) Work areas and the conditions of adjacent areas;</p> <p>(b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;</p> <p>JC: 日本語版では対象外にしましたので、入れることになった理由を教えてください。 May we know why the net is specified though we determined net would not be specified in the Japanese JSSS.</p> <p>MM: 2.5.4 Risk Assessment (2) (b) Safety nets</p> <p>It will be left as it is, as it is in the clause of risk assessment as discussed in last September.</p> <p>NK: 9月27日の会議で安全ネットを規定することを記録しています。 The MM of 9/27 mentions to add safety net as follows: 3. Preparation Method of Chapters for Technical Requirements in English (1) Preparation of JSSS</p>	<p>2.5.2. Height Thresholds</p> <p>The threshold for fall protection in construction work is 2m. The Contractor must provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3. Facilities for Ascending and Descending</p> <p>When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor's Personnel to safely access and descend from such work levels.</p> <p>2.5.4. Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p> <p>(2) Accordingly, and in In advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk pre assessment including checking the following and shall record the results:</p> <p>(a) Work areas and the conditions of adjacent areas;</p> <p>(b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;</p>
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	<p>2.5.5. Handrails</p> <p>(1) Handrails shall be minimum 85 cm high, complete with top-rails and mid-rails designed to withstand 70 kg. of horizontal force, top-rails to withstand 90 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>(2) Mid-rails shall be placed at a height of 35 – 50 cm.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:</p> <p>(a) Displaying appropriate warning signs;</p> <p>(b) Assigning a Spotter to direct non-essential Contractor's Personnel away;</p>	<p>NK explained ... 2.5 Fall Prevention, ... The editing process has <u>adding missing items</u>, to catch as many potential requirements as possible (such as <u>safety nets for example</u>), ...</p> <p>(c) Status of access leading to work areas and any anchorages; and,</p> <p>(d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.</p> <p>2.5.5. Handrails</p> <p>JC: 墜落の危険がある場所には手すりを付ける、という記述をまず入れてください。Please specify at first "handrails shall be provided at places where there is risk of fall".</p> <p>NK: To insert the sentence as follows: The Contractor shall provide handrails at places where there is risk of fall.</p> <p>JICA: Please specify (1) height of handrail, (2) force. May we know the source of force.</p> <p>NK: To modify (1) for height, (2) for force. The source of force is OSHA subpart L 1926.451 (g) Fall Protection (4) (ix). (ix) Mid-rails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along the mid-rail or other member of at least 75 pounds (333 n) for guardrail systems with a minimum 100 pound top-rail capacity, and at least <u>150 pounds (666 n=約 68kg for guardrail systems with a minimum 200 pound (約 90kg) top-rail capacity.</u></p> <p>(1) Handrails shall be minimum 85 cm high, complete with top-rails and mid-rails designed to withstand 70 kg. of horizontal force, top-rails to withstand 90 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>JC: (1)を高さ、(2)を荷重に関する規定に揃えてください。荷重に関する出典はなんでしょうか？</p> <p>(2) Mid-rails shall be placed at a height of 35 – 50 cm.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:</p> <p>(a) Displaying appropriate warning signs;</p> <p>(b) Assigning a Spotter to direct non-essential Contractor's Personnel away;</p>	<p>(c) Status of access leading to work areas and any anchorages; and,</p> <p>(d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.</p> <p>2.5.5 Handrails</p> <p>The Contractor shall provide handrails at places where there is risk of fall.</p> <p>(1) Handrails shall be complete with top-rails of minimum 85 cm high and mid-rails placed at a height of 35 - 50 cm.</p> <p>(2) The top-rail shall be designed to withstand 90 kg. of horizontal force and mid-rails 70 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:</p> <p>(a) Displaying appropriate warning signs;</p> <p>(b) Assigning a Spotter to direct non-essential Contractor's Personnel away;</p>
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- (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets.
- (d) Prohibiting entry to the working area of any non-authorised Contractor's Personnel
- (e) Handrails shall be restored immediately after the necessity for removal has ended.

2.5.6. Toeboards

- (1) Toeboards shall be provided to all handrails to prevent risk of Falling Objects.
- (2) Toeboards shall be minimum 10cm high from top edge to the level of the working platform, runway or ramp.
- (3) Where material, is piled to such height that a 10cm toeboard does not provide protection, panelling from floor to mid-rail, or to top-rail shall be provided.

2.5.7. Temporary Walkways and Passageways

- (1) Installation of walkways and passageways
 The Contractor shall provide safe routes leading to, within and around working areas that ensure safety of passage for Contractor's Personnel and these shall be effectively maintained at all times.
 The Contractor shall display signs clearly indicating the use, extent and directions so that the Contractor's Personnel will adhere to these routes and other activities will be prevented from accessing these routes.

- (2) Handrails

- (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets.
- (d) Prohibiting entry to the working area of any non-authorised Contractor's Personnel
- (e) Handrails shall be restored immediately after the necessity for removal has ended.

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2.5.7. Temporary Walkways and Passageways

- (1) Installation of walkways and passageways
 JC: 定義上の違いは？ safe routes の単なる言い換えか？
 What is difference of these in definition? Are these only paraphrases of safe routes?
 NK: The definition is as follows following OSHA.
 § 1926.851 Stairs, passageways, and ladders.
 (a) Only those stairways, passageways, and ladders, designated as means of access to the structure of a building, shall be used.
 § 1926.450 Scope, application and definitions applicable to this subpart.
Walkway means a portion of a scaffold platform used only for access and not as a work level.
 NK: NK will ask MD if it is proper to use walkways in scaffolds and passageways in the Site in general, footpath outside the Site as mentioned in 2.6.2(12).
 The Contractor shall provide safe routes leading to, within and around working areas that ensure safety of passage for Contractor's Personnel and these shall be effectively maintained at all times.
 The Contractor shall display signs clearly indicating the use, extent and directions so that the Contractor's Personnel will adhere to these routes and other activities will be prevented from accessing these routes.

- (2) Handrails

- (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets.
- (d) Prohibiting entry to the working area of any non-authorised Contractor's Personnel
- (e) Handrails shall be restored immediately after the necessity for removal has ended.

2.5.6. Toeboards

- (1) Toeboards shall be provided to all handrails to prevent risk of Falling Objects.
- (2) Toeboards shall be minimum 10cm high from top edge to the level of the working platform, runway or ramp.
- (3) Where material, is piled to such height that a 10cm toeboard does not provide protection, panelling from floor to mid-rail, or to top-rail shall be provided.

2.5.7. Temporary Walkways and Passageways

- (1) Installation of walkways and passageways

The Contractor shall provide safe routes leading to, within and around working areas that ensure safety of passage for Contractor's Personnel and these shall be effectively maintained at all times.

The Contractor shall display signs clearly indicating the use, extent and directions so that the Contractor's Personnel will adhere to these routes and other activities will be prevented from accessing these routes.

- (2) Handrails

<p>2.5.4 作業床端、開口部からの墜落防止措置</p> <p>請負者は、高さが 2m 以上の作業床端、開口部からの墜落防止のために次の措置を講じなければならない。 →E2.5.9(1)に規定済み</p> <p>(1) 作業床の端、開口部等には、必要な強度を持つ囲い、手すり、覆い等(以下「囲い等」という)を設置すること。→E2.5.9(2)(3)に規定済み</p> <p>(2) 囲い等を設けることが著しく困難なとき又は作業の必要上臨時に囲い等を取りはずすときは作業員に墜落制止用器具を使用させること。→E2.5.9(4)に規定済み</p> <p>(3) 床上の開口部の覆い上には、原則として材料等を置かないこととし、その旨を表示すること。→記述なし。→(NKの方針: 下記(4)(5)も含めて解釈により他項目との重複の可能性はあるが、具体的な留意点として加えるべきと考える。</p> <p>(4) 囲い等をやむを得ず取りはずして作業をする場合には、当該場所への関係作業員以外の立入禁止措置(標識の設置、作業員への周知)及び監視員の配置を行うこと。また、取りはずした囲い等は、作業終了後直ちに復旧すること。→記述なし。(上記(3)参照)</p> <p>(5) 作業床の端、開口部等の囲い等の点検を作業開始前に必ず行い、不具合のある施設の使用禁止措置を行うと同時に修理や復旧の措置を迅速に行うこと。→記述なし。(上記(3)参照)</p>	<p>At any point where there may be a risk of Contractor's Personnel falling from temporary passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].</p> <p>Alternatively, the Contractor shall provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8. Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms can be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.6 (3).</p> <p>2.5.9. Preventing Falls from the Ends and Openings of Working Platforms</p> <p>(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.</p> <p>(2) The Contractor shall provide handrails to all ends, edges and openings.</p> <p>(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.</p> <p>(4) If for any reason it is not possible to enclose the areas, or provide covers or when same is ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.6 (3).</p>	<p>At any point where there may be a risk of Contractor's Personnel falling from temporary passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].</p> <p>Alternatively, the Contractor shall may provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8. Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms can be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.7(3).</p> <p>2.5.9. Preventing Falls from the Ends and Openings of Working Platforms</p> <p>(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.</p> <p>(2) The Contractor shall provide handrails to all ends, edges and openings.</p> <p>(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.</p> <p>(4) If for any reason it is not possible to enclose the areas, or provide covers or when same is ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 [Handrails].</p> <p>JC: 個人的にはニュアンスがわからない。ずっとあるいは一時的になら or が入るのでは? Personally, cannot understand the nuance. If this is for long time or temporary, it needs "or" between theses.</p> <p>NK: この"ever"は「もしも」「仮に」「というようなことがあったら」とかの意を表していると思います。NK assume this</p>	<p>At any point where there may be a risk of Contractor's Personnel falling from temporary walkways and passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].</p> <p>Alternatively, the Contractor shall provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8. Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms can be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 5(4).</p> <p>2.5.9. Preventing Falls from the Ends and Openings of Working Platforms</p> <p>(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.</p> <p>(2) The Contractor shall provide handrails to all ends, edges and openings.</p> <p>(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.</p> <p>(4) If for any reason it is not possible to enclose the areas, or provide covers or when same is ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 [Handrails].</p>
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<p>(6) 開口部の覆いは、覆い上を通行する可能性のある作業員などの通過物に対して2倍以上の耐力を確保すること。→E2.5.9(3)に規定済み</p> <p>2.5.5 掘削作業における墜落防止措置</p> <p>(1) 請負者は、墜落のおそれのある人力のり面整形作業等では、親綱を設置し、墜落制止用器具を使用させなければならない。その際、親綱の上方のり面との接触による土砂等の崩壊等が生じないように配慮しなければならない。→E2.5.10(1)(2)に規定済み</p> <p>(2) 請負者は、斜面を昇降する必要がある場合には、安全な昇降設備を設けなければならない。施工上、当該措置が講じ難い場合は、親綱を設置し墜落制止用器具を使用させること。この場合、親綱の固定部は、ゆるみ等が生じないよう十分安全性について確認しなければならない。→E2.5.10(3)に規定済み</p> <p>(3) 請負者は、のり肩を通路とする際には、転落防止柵等を設置しなければならない。→E2.5.10(4)に規定済み</p> <p>(4) 請負者は、土留・支保工内の掘削には、最低2箇所通路を設置することとし、切梁、腹起し等の土留・支保工部材上の通行を禁止しなければならない。→規定なし。→追記する。E2.5.10(5)にトレンチ掘削の上を渡る場合の規定あり。</p>	<p>2.5.10. Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <ol style="list-style-type: none"> (1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access. (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces. (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached. (4) Installing handrails where the slope shoulder is used as a passageway. (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system. 	<p>“ever” means “if”, “in case”. NK propose to modify as right.</p> <p>2.5.10. Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <ol style="list-style-type: none"> (1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access. (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces. (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached. (4) Installing handrails where the slope shoulder is used as a passageway. (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system. <p>JC: 昇降設備の基準に同じ? Is this (30m) same as specification for elevating access facility?</p> <p>NK: This is for crossing over the trench excavation which is not specified in Japanese version.</p> <p>NK: Access and egress in trench excavation and other pit excavation will be specified in (6) & (7) as Japanese 2.5.5 (4) and OSHA below.</p> <p>§ 1926.651 Specific excavation requirements. (c) Access and egress</p> <p>(2) Means of egress from trench excavations. A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet (1.22 m) or more in depth so as to require <u>no more than 25 feet (7.62 m) of lateral travel for employees.</u></p>	<p>2.5.10. Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <ol style="list-style-type: none"> (1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access. (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces. (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached. (4) Installing handrails where the slope shoulder is used as a passageway. (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system. <p>(6) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in trench excavations that are 1.2 m or more in depth so as to require no more than 7.5 m of lateral travel for Contractor's Personnel.</p> <p>(7) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in deep excavations with/without shoring system and prohibiting all Contractor's Personnel from crossing on the shoring system.</p>
<p>2.5.6 ロープ高所作業における墜落防止措置</p> <p>請負者は、高さが2m以上の箇所、作業床を設けることが困難な箇所においてロープ高所作業を行う場合には、墜落防止のために下記の措置を講じなければならない。→E2.5.11(1)に規定済み</p>	<p>2.5.11. Measures for Preventing Falls during Rope Access Work</p> <ol style="list-style-type: none"> (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example: 	<p>2.5.11. Measures for Preventing Falls during Rope Access Work</p> <ol style="list-style-type: none"> (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example: 	<p>2.5.11. Measures for Preventing Falls during Rope Access Work</p> <ol style="list-style-type: none"> (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example:

<p>(1) 墜落防止のための措置→E2.5.11(1)に規定済み</p> <p>(a) 身体保持器具を取り付けた親綱以外に、墜落制止用器具を取り付けるための命綱を設置すること。→E2.5.11(1)(a)に規定済み</p> <p>(b) 親綱、命綱、これらを支持物に緊結するための緊結具、身体保持器具及びこれを親綱に取り付けるための接続器具(以下これを「親綱等」という。)については、十分な強度を有するものであって、著しい損傷、摩耗、変形又は腐食がないものを使用すること。→E2.5.11(1)(b)に規定済み</p> <p>(2) 親綱・命綱・身体保持器具→E2.5.11(2)に規定済み</p> <p>(a) 親綱と命綱は、作業箇所の上方のそれぞれ異なる堅固な支持物に、外れないように確実に緊結すること。→E2.5.11(2)(a)に規定済み</p> <p>(b) 親綱と命綱は、ロープ高所作業に従事する作業員が安全に昇降するため十分な長さとする。→E2.5.11(2)(b)に規定済み</p> <p>(c) 突起物などで親綱や命綱が切断するおそれのある箇所では、覆いを設けるなど切断を防止するための措置をとること。→E2.5.11(2)(c)に規定済み</p> <p>(d) 親綱は異なる2つ以上の強固な支持物に緊結すること。→E2.5.11(2)(d)に規定済み</p> <p>(e) 身体保持器具は接続器具を用いて確実に取り付けること。なお接続器具は使用する親綱に適合したものをを使用すること。→E2.5.11(2)(e)に規定済み</p> <p>(3) 作業の手続き</p> <p>(a) 作業開始前の調査 請負者は、作業を行う箇所について、あらかじめ、次の項目を調査しその結果を記録すること。</p> <p>(i) 作業箇所とその下方の状況→規定なし。(英文案では、(b)の作業計画書・安全衛生詳細計画書の内容に含むべきとしていて考えられる。→(NK)の方針:英文案の構成のままとする。)</p>	<p>(a) Installing back-up safety lifeline (lifeline) attached to the PFRS in addition to the working line to which the harness is attached; and</p> <p>(b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.</p> <p>(2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:</p> <p>(a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;</p> <p>(b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;</p> <p>(c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) That the working line is anchored to two or more independent strong supports; and</p> <p>(e) The PFAS is securely attached to the harness and the connecting devices are compatible with the working line and lifeline used.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor's Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p>	<p>(a) Installing back-up safety lifeline (lifeline) attached to the PFRS in addition to the working line to which the harness is attached; and</p> <p>JC: 括弧書きの意味が不明です。The meaning of phrase in parentheses is not clear. NK: It is duplicated, so it is deleted. The working line and lifeline only are specified as right.</p> <p>JC: ここ、日本は PFAS 間違っていないですか。It is PFAS in Japan. Is it correct? NK: (a) is revised as right.</p> <p>(b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.</p> <p>(2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:</p> <p>(a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;</p> <p>(b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;</p> <p>(c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) The working line is anchored to two or more independent strong supports; and</p> <p>(e) The PFAS is securely attached to the harness and the connecting devices are compatible with the working line and lifeline used.</p> <p>JC: 上がミス? Is the (a) above incorrect. NK: (e) is correct.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor's Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p>	<p>(a) Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; and</p> <p>(b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.</p> <p>(2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:</p> <p>(a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;</p> <p>(b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;</p> <p>(c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) The working line is anchored to two or more independent strong supports; and</p> <p>(e) The PFAS is securely attached to the harness and the connecting devices are compatible with the working line and lifeline used.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor's Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p>
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<p>(ii) 親綱と命綱を緊結するためのそれぞれの支持物の位置、状態、それらの周囲の状況→E2.5.11(3)(a)に規定済み</p> <p>(iii) 作業箇所と支持物に通じる通路の状況→規定なし。→(NKの方針:上記(i)と同様とする。)</p> <p>(iv) 親綱又は命綱の切断のおそれのある箇所の有無並びにその位置及びその状態→E2.5.11(3)(d)に規定済み</p> <p>(b) 作業計画書及び安全衛生詳細計画書</p> <p>請負者は、ロープ高所作業を行う場合には、前項の調査を踏まえ、同作業に関する作業計画書及び安全衛生詳細計画書を作成し、同計画書に記載された下記事項について作業員へ周知すること。→E2.5.11(3)に規定済み</p> <p>(i) 作業の方法及び順序→E2.5.11(5)に規定済み。(但し、Method Statementで周知すべき内容として)</p> <p>(ii) 作業に従事する作業員の人数→E2.5.11(5)に規定済み。(i)と同様)</p> <p>(iii) 親綱及び命綱を緊結するためのそれぞれの支持物の位置→E2.5.10(3)(a)に規定済み</p> <p>(iv) 使用する親綱等の種類及び強度→E2.5.11(3)(b)に規定済み</p> <p>(v) 使用する親綱及び命綱の長さ→E2.5.11(3)(c)に規定済み</p> <p>(vi) 切断のおそれのある箇所及び切断防止措置→E2.5.11(3)(d)に規定済み</p> <p>(vii) 親綱及び命綱を支持物に緊結する作業に従事する作業員の墜落による危険を防止するための措置→E2.5.11(3)(e)に規定済み</p> <p>(viii) 物体の落下による作業員の危険を防止するための措置→E2.5.11(4)(a)に規定済み</p> <p>(ix) 労働災害が発生した場合の応急の措置→E2.5.11(4)(b)に規定済み</p> <p>(c) 請負者は、ロープ高所作業を行うときは、当該作業を指揮する作業主任を任命し、その者に前項の作業計画に基づき作業の指揮を行わせるとともに、次の事項を行わせること。→E2.5.11(5)に規定済み</p> <p>(i) 作業の開始前に作業計画書及び安全衛生詳細計画書の内容を作業員に対して周知すること。→E2.5.11(5)(a)に規定済み</p> <p>(ii) 作業の開始前に当日使用する器具を点検し、異常がある場合は直ちに補修又は取り替えること。→E2.5.11(5)(b)に規定済み</p> <p>(iii) 親綱・命綱、墜落制止用器具及び保護帽についての措置が実施された後、作業員に作業を開始させること。→E2.5.11(5)(c)に規定済み</p>	<p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chaffed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor's Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide:</p> <p>(a) Measures to prevent any danger to Contractor's Personnel from falling objects; and</p> <p>(b) First-aid and emergency medical measures in the event of occupational accidents.</p> <p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and direct the work based on the Safety Plan and perform the following duties:</p> <p>(a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;</p> <p>(b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;</p> <p>(c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFAS and PPE,</p> <p>(d) Ensure Contractor's Personnel use PFAS correctly, and, have them fix the PFAS to the life lines, and,</p> <p>(e) Appoint only Contractor's Personnel who are appropriately qualified, skilled and experienced in this type of work and provide additional as the Contractor considers necessary for this purpose.</p>	<p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chaffed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor's Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide:</p> <p>(a) Measures to prevent any danger to Contractor's Personnel from falling objects; and</p> <p>(b) First-aid and emergency medical measures in the event of occupational accidents.</p> <p>IC: (b)は全ての作業に共通する話であり、総則で全体をカバーする形で規定しているため削除。The clause (b) is common to all works. This is mentioned in Chapter 1 to cover the whole. Delete.</p> <p>NK: Deleted.</p> <p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and direct the work based on the Safety Plan and perform the following duties:</p> <p>(a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;</p> <p>(b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;</p> <p>(c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFAS and PPE,</p> <p>(d) Ensure Contractor's Personnel use PFAS correctly, and, have them fix the PFAS to the life lines, and,</p> <p>(e) Appoint only Contractor's Personnel who are appropriately qualified, skilled and experienced in this type of work and provide additional as the Contractor considers necessary for this purpose.</p> <p>IC: (e) qualified, skilled and experiencedな要員を配置するのは大前提であり不要。It is a premise to place "qualified, skilled and experienced personnel". Thus, deleted.</p> <p>NK: Deleted.</p>	<p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chaffed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor's Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide measures including providing Contractor's Personnel PPE to prevent any danger to Contractor's Personnel from falling objects.</p> <p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and direct the work based on the Safety Plan and perform the following duties:</p> <p>(a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;</p> <p>(b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;</p> <p>(c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFAS, PFAS and PPE; and</p> <p>(d) Ensure Contractor's Personnel use PFAS, PFAS correctly, and, have them fix the PFAS to the life lines.</p>
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<p>(iv) 作業に従事する作業員に墜落制止用器具を使用させること。使用する墜落制止用器具は命綱に取り付けさせること。→E2.5.11(5)(d)に規定済み</p> <p>(v) 物体の飛来・落下による事故防止のため、作業員に保護帽を着用させること。→E2.5.11(4)に規定済み</p> <p>(d) ロープ高所作業に従事する作業員(補助員は除く)は総則で規定の特別教育修了者を配置すること。→E2.5.11(5)(e)に規定済み</p> <p>2.5.7 作業員に対する措置</p> <p>請負者は、墜落防止のために作業員に対する下記の措置を講じなければならない。→E2.5.12に規定済み</p> <p>(1) 新規に入場した作業員に対しては、当該現場の墜落のおそれのある箇所及び作業について、作業の開始前に安全教育を行うこと。→E2.5.12(1)に規定済み</p> <p>(2) 作業開始前に、墜落のおそれのある箇所の説明を行うこと。→E2.5.12(1)に規定済み(含まれる)</p> <p>(3) 墜落防止設備及び囲い等の無断取りはずしの禁止について教育し、監督指導すること。→E2.5.12(2)に規定済み</p> <p>(4) 墜落制止用器具を含む保護具の保管管理について指導すること。→E2.5.12(3)に規定済み</p> <p>(5) 高所作業に従事する作業員については、年齢、体力等に配慮し、特に健康状態を確認して配置すること。→E2.5.12(4)に規定済み</p> <p>(6) 高所の作業においては、未熟練者、高齢者の配置を避けること。→E2.5.12(4)に規定済み</p> <p>(7) 高さ2m以上の箇所で行なう場合において、強風、大雨、大雪等の悪天候のため、当該作業の実施について危険が予想されるときは、作業を中止すること。→E2.5.12(5)に規定済み</p> <p>2.5.8 墜落防止に関する保護具</p> <p>請負者は、作業員に墜落制止用器具を使用させる場合、次を遵守しなければならない。</p> <p>(1) 墜落制止用器具は、フルハーネス型を原則とする。ただし、墜落時に着用者が地面に到達するおそれのある場合(フルハーネス型を使用した場合の自由落下距離、ショックアブソーバの伸び及び安全離隔距離(1m)の合計長さが作業時の高さを超える場合)、胴ベルト型の使用を認める。→E2.5.13(1)(2)に規定済み</p> <p>(2) 墜落制止用器具は、当該墜落制止用器具の着用者の体重及びその装備品の質量の合計に耐えるものでなければならない。→E2.5.13(3)に規定済み</p> <p>(3) ショックアブソーバについては、装着者の作業状態</p>	<p>2.5.12. Further Measures for Contractor's Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including for example taking the following measures before any work commences:</p> <p>(1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.</p> <p>(2) Prohibit the unauthorized removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.</p> <p>(3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PPE, PFRS and PFAS.</p> <p>(4) For Contractor's Personnel to be engaged in rope access work, check their qualifications, experience, age, physical strength, and health conditions and certify whether they are fit to carry out rope access work.</p> <p>(5) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.</p> <p>2.5.13. Personal Protective Equipment for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:</p>	<p>2.5.12. Further Measures for Contractor's Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including for example taking the following measures before any work commences:</p> <p>(1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.</p> <p>(2) Prohibit the unauthorized removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.</p> <p>(3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PPE, PFRS and PFAS.</p> <p>(4) For Contractor's Personnel to be engaged in rope access work, check their qualifications, experience, age, physical strength, and health conditions and certify whether they are fit to carry out rope access work.</p> <p>JC: (4) これも条件を満たす要員を配置するのが大前提なので不要。By the same reason as above, deleted.</p> <p>NK: Deleted.</p> <p>(5) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.</p> <p>2.5.13. Personal Protective Equipment for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:</p> <p>JC: 2.5.1(3)で、PFRSがPFASに優先するという規定があるので、PFRSを最初に論じ、その後にPFASについて規定する順番で書き直し願います。</p> <p>The 2.5.1(3) specifies PFRS takes precedence over PFAS. Please change the order as PFRS at first and PFAS next.</p> <p>NK: The order is changed. (1) now states PFSR as right.</p> <p>NK: 以下のコメントと変更が良く理解できませんでした。右のように変更しました。NK cannot fully</p>	<p>2.5.12. Further Measures for Contractor's Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including for example taking the following measures before any work commences:</p> <p>(1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.</p> <p>(2) Prohibit the unauthorized removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.</p> <p>(3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PPE, PFRS and PFAS.</p> <p>(4) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.</p> <p>2.5.13. Personal Protective Equipment for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:</p>
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<p>(コネクタの取付設備の高さ、ランヤードの長さ等)から想定される自由落下距離に応じた、適切な仕様・種別のもので選定すること。→E2.5.13(4)に規定済み</p> <p>(4) 墜落制止用器具は、見やすい箇所に当該墜落制止用器具の種類、製造者名及び製造年月が表示されているものでなければならない。→E2.5.13(5)に規定済み</p> <p>(5) 上記以外の保護具及び器具</p> <p>上記規定にかかわらず墜落防止に関する保護具及び器具については、作業員に次の規則に拠る保護具を使用させることも可とする。</p> <p>米国 OSHA 規則 Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems →E2.5.13(6)に規定済み</p>	<p>(1) Provide PFAS which shall be the full harness type and shall comprise of a body harness, an anchorage, connectors, lanyard, deceleration device, lifeline, or suitable combination of these, if there is any risk of the Contractor's Personnel hitting the ground if they fall (that is, where the combined length of free fall, plus extension of shock absorber, plus safe separation distance (1 m), when full harness type is used, exceeds the working height),</p> <p>The use of a Safety Belt for PFAS is prohibited. Wherever PFAS is provided for use, the Contractor shall ensure that it is used.</p> <p>PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself.</p> <p>For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of installed connector equipment, length of lanyard, etc.).</p> <p>(2) Provide PFRS which shall be the same as above but designed to restrict the movement of workers and prevent them from reaching the edge of any working area and therefore eliminating the risk of a fall. PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p>	<p>understand JICA's comment and revision, however NK revised as right.</p> <p>NK: フルハーネス型の落下距離は、次の参考の内、OSHA にもとづき規定しました。 NK prepared the total fall clearance assistance of PFAS referring to OSHA. 墜落制止用器具の安全な使用に関するガイドラン (平成 30 年 6 月 22 日付け基発 0622 第2号) https://www.mhlw.go.jp/file/04-Houdouhappyou-11302000-Roudoukijunkyokuanzenseiseibu-Anzenka/0000212917.pdf OSHA Technical Manual General Information Section V: Chapter 4 Fall Protection in Construction https://www.osha.gov/dts/osta/otm/otm_v/otm_v_4.html</p> <p>(1) (JICA revised version from NK (1)) Provide PFAS which shall be the full harness type and shall comprise of a body harness, an anchorage, connectors, lanyard, deceleration device, lifeline, or suitable combination of these, if there is any risk of the Contractor's Personnel hitting the ground if they fall (that is, where the combined length of free fall, plus extension of shock absorber, plus safe separation distance (1 m), when full harness type is used, exceeds the working height),</p> <p>JC: この部分の内容と、この後(that is 以下)の内容が矛盾しています。The contents of the first three lines of this clause is inconsistent with the following phrase in parentheses.</p> <p>NK: The sentence is reconstructed as right.</p> <p>The use of a Safety Belt for PFAS is prohibited. Wherever PFAS is provided for use, the Contractor shall ensure that it is properly used.</p> <p>JC: 意味不明 The meaning of this phrase is unknown</p> <p>PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself.</p> <p>For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of installed connector equipment, length of lanyard, etc.).</p> <p>(2) (JICA revised version from NK (2)) Provide PFRS which shall be the same as above but designed to restrict the movement of workers and prevent them from reaching the edge of any working area and therefore eliminating the risk of a fall. PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary</p>	<p>(1) The Contractor shall provide PFRS as follows:</p> <p>(a) PFRS shall be the same as PFAS specified below but designed to restrict the movement of workers and prevent them from reaching the edge of any working area and therefore eliminating the risk of a fall.</p> <p>(b) PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p> <p>(2) The Contractor shall provide PFAS as follows:</p> <p>(a) The PFAS shall be the full harness type and shall comprise of a body harness, connectors, lanyard, deceleration device, lifeline, anchorage, or suitable combination of these.</p> <p>(b) The use of a Safety Belt for PFAS is prohibited except the case that if there is any risk of the Contractor's Personnel hitting the lower surface when the full harness type is used, the total fall clearance distance calculated as below is less than the distance between the point at which a worker would be anchored and any lower surface. The total fall clearance distance for PFAS with a shock-absorbing lanyard is calculated as the total of free fall distance, deceleration distance, D-ring shift, back D-ring height, and safety factor. (Refer to OSHA Technical Manual General Information, Section V: Chapter 4 Fall Protection in Construction, III. Measurements for Assessing Fall Hazards and Controls, A. Total Fall Clearance Distance for PFAS.)</p> <p>(c) PFAS shall withstand the total force exerted on the system by the Contractor's Personnel</p>
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	<p>Wherever PFRS is provided for use, the Contractor shall ensure that it is used.</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Contractor's Personnel may also use protective equipment in accordance with the following standard for protective equipment and equipment concerning fall prevention.</p> <p>Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.</p> <p>(5) Inspection of any safety equipment</p> <p>Before starting work for example using PFRS or PFAS, the systems and anchorages to which the systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.14. Portable Ladders and Stepladders</p> <p>For further requirements, refer to JSSS 7.4 Walkways, Ladders and Stepladders</p> <p>2.5.15. Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p> <p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p>	<p>equipment, typically including a lanyard, lifeline and other devices.</p> <p>Wherever PFRS is provided for use, the Contractor shall ensure that it is used.</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Contractor's Personnel may also use protective equipment in accordance with the following standard for protective equipment and equipment concerning fall prevention.</p> <p>Part 1926 Safety and Health Regulations for Construction, Subpart M Fall Protection, §1926.502 Fall protection systems criteria and practices, (d) Personal fall arrest systems.</p> <p>JC: 削除することで問題ないと考えますが、削除した意図を確認したく。Deletion of this clause is agreeable. Please explain the reason of deletion.</p> <p>NK: NK is not deleted but JICA did. The Subpart M is specified for the Contractor to refer to in 2.5.1 (2), so the above deletion does not affect to JSSS.</p> <p>(5) Inspection of any safety equipment</p> <p>Before starting work for example using PFRS or PFAS, the systems and anchorages to which the systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.13. Portable Ladders and Stepladders</p> <p>For further requirements, refer to JSSS 7.4 Walkways, Ladders and Stepladders</p> <p>2.5.14. Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p> <p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p>	<p>falling, including the weight of the system itself.</p> <p>(d) For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of anchored point, installed connector equipment, length of lanyard, etc.).</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Inspection of any safety equipment</p> <p>Before starting work for example using PFRS or PFAS, the systems and anchorages to which the systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.13. Portable Ladders and Stepladders</p> <p>For further requirements, refer to JSSS 7.4 Walkways, Ladders and Stepladders</p> <p>2.5.14. Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p> <p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p>
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When working on, accessing or crossing, floor or roof areas (including uncompleted areas under construction), or fragile roofs such as those covered with slates, tiles or other non-loadbearing coverings or where there is any risk of breaking and or falling through such areas, the Contractor shall provide continuous bearing boards for workers to walk on, with a minimum width of 60 cm or sufficiently wider to provide safe transit and where necessary to spread the bearing load on the surface and avoid penetration. The boards shall be fixed together and secured to the underlying surface by tying with ropes or clips to prevent any movement.

Unless otherwise approved by the HSO, handrails shall be provided to both sides.

If the underlying surface or roofing is too fragile for such measures and access is required, the Contractor shall provide an independent scaffolding boarded walkway with handrails both sides, which does not bear upon the existing roof but that is supported independently by a scaffolding structure.

(4) Demolition or Alteration of Buildings and Structures

When carrying out demolition or alteration of buildings or structures and where there is a risk of fall for Contractor's Personnel, the Contractor shall take the following measures:

- (a) Appoint an Operation Leader to be engaged on the work;
- (b) Safely supervise the work; and
- (c) Inform and train Contractor's Personnel engaged in the said work so that they are aware in advance of the work methods and procedures.

2.5.16. Safety Nets

- (1) The Contractor shall provide safety nets when workplaces are more than 7.50m above the lower ground or water surface and where the use of another type of fall prevention system is impractical or has been removed.
- (2) Operations shall not be undertaken until the net is in place and has been inspected and tested.
- (3) Nets shall extend 2.50m beyond the edge of the work surface where Contractor's Personnel may be at risk and shall be installed

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	<p>as close under the working surface as practical but in no case more than 7.50m below such work surface.</p> <p>(4) Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.</p> <p>(5) The mesh size of nets shall not exceed 15 cm by 15 cm. All new nets shall bear a label of proof test from the manufacturer that they can withstand 23,000 Nm minimum impact resistance. Edge ropes shall provide a minimum breaking strength of 2,300kg.</p> <p>(6) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.</p>	<p>under the working surface as practical but in no case more than 7.50m below such work surface.</p> <p>(4) Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.</p> <p>(5) The mesh size of nets shall not exceed 15 cm by 15 cm. All new nets shall bear a label of proof test from the manufacturer that they can withstand 23,000 Nm minimum impact resistance. Edge ropes shall provide a minimum breaking strength of 2,300kg.</p> <p>JC: どこから？安全ネットシステムを入れるのは良いけど、サイズも含めてこれら基準は緩くないか？ Where this (23,000N) come from? Not those standards below? It is good to incorporate the safety net system, however, the criteria seem not strict including for the size?</p> <p>OSHA: 6inch 17,500 foot pounds 5000 pounds 1865kg BS EN1263-1 Temporary works equipment. Safety nets. Safety requirements, test methods</p> <p>NK: Source is OSHA 1926.105 Safety nets copied below (d) The mesh size of nets shall not exceed 6 inches (15.24cm) by 6 inches. All new nets shall meet accepted performance standards of 17,500 foot-pounds (23,726Nm 2,419kgm) impact resistance as determined and certified by the manufacturers, and shall bear a label of proof test. Edge ropes shall provide a minimum breaking strength of 5,000 pounds (2,268kg).</p> <p>(6) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.</p> <p>NK: OSHA1926.105 (e) specifies term with "safety". Safety hook will be used as it is.</p>	<p>under the working surface as practical but in no case more than 7.50m below such work surface.</p> <p>(4) Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.</p> <p>(5) The mesh size of nets shall not exceed 15 cm by 15 cm. All new nets shall bear a label of proof test from the manufacturer that they can withstand 23,700 Nm minimum impact resistance. Edge ropes shall provide a minimum breaking strength of 2,270kg.</p> <p>(6) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.</p>
<p>2.6 飛来落下の防止措置</p> <p>請負者は、作業のため物体が飛来又は落下(以下、「飛来落下」という。)することにより、工事関係者又は第三者に危険が及ぶことを防止するために、以下の措置を講じなければならない。→E2.6.1に規定済み</p> <p>2.6.1 物体の落下による危険防止のための措置</p> <p>(1) 請負者は、作業場所における物体の落下による危険を防止する次の措置を講じなければならない。→E2.6.1に規定済み</p> <p>(a) 作業により物体が落下することで、下部にいる請負者の要員に危険を及ぼすおそれのある作業場所の端及び開口部にメッシュシート(Debris net)又は高さ10cm以上の幅木を設置すること。→E2.6.2(1)(2)に規定済み</p> <p>(b) 作業の性質上メッシュシート若しくは幅木を設けることが著しく困難な場合又は臨時にメッシュシート若しくは幅木を取り外す場合は、立入禁止区域を設定すること。→規定なし。</p>	<p>2.6 FALLING OBJECTS</p> <p>2.6.1. General</p> <p>The Contactor shall take all necessary measures to avoid danger and prevent damage and injury to Contractor's Personnel, Employer's Personnel and any other persons including third parties that are on or adjacent to or in the vicinity of the Site whether connected with the Works or otherwise, and who may be at risk from Falling Objects.</p> <p>In general, this shall be accomplished by:</p> <p>(1) Providing secure temporary barriers to prevent or capture falling objects, designed by the Contractor to be of sufficient strength to capture all Falling Objects without perforating and where necessary shall be of an aesthetic design to be approved the Engineer.</p>	<p>2.6 FALLING OBJECTS</p> <p>2.6.1. General</p> <p>The Contactor shall take all necessary measures to avoid danger and prevent damage and injury to Contractor's Personnel, Employer's Personnel and any other persons including third parties that are on or adjacent to or in the vicinity of the Site whether connected with the Works or otherwise, and who may be at risk from Falling Objects.</p> <p>In general, this shall be accomplished by:</p> <p>(1) Providing secure temporary barriers to prevent or capture Falling Objects, designed by the Contractor to be of sufficient strength to capture all Falling Objects without perforating and which, where necessary, shall be of an aesthetic design to be approved the Engineer.</p>	<p>2.6 FALLING OBJECTS</p> <p>2.6.1. General</p> <p>The Contactor shall take all necessary measures to avoid danger and prevent damage and injury to Contractor's Personnel, Employer's Personnel and any other persons including third parties that are on or adjacent to or in the vicinity of the Site whether connected with the Works or otherwise, and who may be at risk from Falling Objects.</p> <p>In general, this shall be accomplished by:</p> <p>(1) Providing secure temporary barriers to prevent or capture Falling Objects, designed by the Contractor to be of sufficient strength to capture all Falling Objects without perforating and which, where necessary, shall be of an aesthetic design to be approved the Engineer.</p>

<p>E2.62(3)に一般的に規定している。→(NKの方針:本項目を(3)に追記する。)</p> <p>(c) 構造物の出入口と外部足場が交差する場所の出入口上部には、物体の落下防止の防護棚を設置すること、併せて出入口には安全な通路を指定すること。→E2.6.2(4)(5)に規定済み</p> <p>(d) 物体の落下防止のためのメッシュシートの使用及び管理は次であること。→E2.6.2(11)に規定済み</p> <p>(i) メッシュシートは、網目の寸法 12mm 以下又は想定される落下物の落下防止に応じた網目の寸法で、落下物による破損が生じない強度を有する、物体の落下防止を目的とするものを使用すること。→E2.6.2(11)(a)(b)に規定済み</p> <p>(ii) メッシュシートに網目の乱れ、破損があるものは使用しないこと。→E2.6.2(11)(c)に規定済み</p> <p>(iii) 作業の都合上、メッシュシートを取りはずしたときは当該作業終了後すみやかに復元すること。→E2.6.2(11)(d)に規定済み</p> <p>(i) メッシュシートは、少なくとも毎週 1 回は点検し、破損等があった場合には直ちに補修すること。→E2.6.2(11)(e)に規定済み</p> <p>(ii) メッシュシート上に、落下物があるときは、作業前に落下物を除去すること。→E2.6.2(11)(f)に規定済み</p> <p>(2) 請負者は、作業場所が道路又は民家等に近接していて、物体の落下による危険が第三者に及ぶおそれがある場合は、次の措置を講じなければならない。→E2.6.2(12)に規定済み</p> <p>(a) 上記(1)(a)から(c)と同様の措置を講ずること。→E2.6.2(12)(a)に規定済み</p> <p>(b) 現場に近接する歩道には防護棚又は仮設屋根を設置すること。→E2.6.2(12)(a)に規定済み</p> <p>(c) 一時的に上記の措置が取れないときは、安全な通路又は迂回路を設置するとともに誘導員を配置し、通行車両及び歩行者の安全を確保すること。→E2.6.2(12)(b)に規定済み</p>	<p>(2) Providing a safe means of raising and lowering Goods, tools, waste and debris</p> <p>(3) Providing an exclusion zone prohibiting persons and traffic from entering areas where falling objects could be a risk, including providing pedestrian and traffic diversions.</p> <p>(4) Using PPE.</p> <p>(5) Provide coloured warning tape, barriers and signage warning of “DANGER FALLING OBJECTS” in addition to all other preventive measures.</p> <p>2.6.2. General Preventive Measures</p> <p>(1) All horizontal boarded areas of scaffolding shall be provided with substantial and continuous toeboards to all edges.</p> <p>(2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas.</p> <p>(3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or external walls.</p>	<p>(2) Providing a safe means of raising and lowering Goods, tools, waste and debris</p> <p>(3) Providing an exclusion zone prohibiting persons and traffic from entering areas where Falling Objects could be a risk, including providing pedestrian and traffic diversions.</p> <p>NK: The following clause mentioned in Japanese is omitted but important, so it is reinstated in (3). “Establish a prohibited entry area if it is extremely difficult to provide a mesh sheet or toe-board due to the nature of the work, or if the mesh sheet or baseboard is to be removed temporarily.”</p> <p>(4) Using PPE.</p> <p>(5) Providing coloured warning tape, barriers and signage warning of “DANGER FALLING OBJECTS” in addition to all other preventive measures.</p> <p>2.6.2. General Preventive Measures</p> <p>(1) All horizontal boarded areas of scaffolding shall be provided with a substantial and continuous toe-board to all edges.</p> <p>JC: minimum 10cm highから変更の経緯 →この変更については日本側調査団も了解のうえのものという理解でよろしいでしょうか。The history of change from “minimum 10cm high” to no mentioning height. Was this change made based on the consent of NK’s Japanese side?</p> <p>MM: The height of toeboards will be 10 cm as specified as original.</p> <p>NK: The height of 10 cm in minimum is specified in 2.5.6 (2), so not mentioned here.</p> <p>(2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas.</p> <p>(3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or external walls.</p> <p>JC: そもそもこれ何？周辺フェンスなら建築物側の壁の方ということ？ →wall があるなら物は落ちない筈です。これは外壁部を訳したものでしょうか？ non-native にも分かりやすい表現でお願いします。</p> <p>What is this (external wall) all about? If it is surrounding fence, it means the wall of building side? If so, any object wouldn’t fall because of the wall. Is this the translation of “outer wall”? Please describe with expression that is understandable by non-native.</p> <p>NK: They mean openings of external wall without scaffolding. (3) is modified as right.</p> <p>(4) Safe passageways with substantial roof, walls and floors sides shall also be provided over entrances and exits.</p>	<p>(2) Providing a safe means of raising and lowering Goods, tools, waste and debris</p> <p>(3) Providing an exclusion zone prohibiting persons and traffic from entering areas where Falling Objects could be a risk, including providing pedestrian and traffic diversions. The exclusion zone shall include the cases that it is extremely difficult to provide mesh sheets or toe-board due to the nature of the work, or mesh sheets or baseboards are temporarily removed.</p> <p>(4) Using PPE.</p> <p>(5) Providing coloured warning tape, barriers and signage warning of “DANGER FALLING OBJECTS” in addition to all other preventive measures.</p> <p>2.6.2.General Preventive Measures</p> <p>(1) All horizontal boarded areas of scaffolding shall be provided with a substantial and continuous toe-board to all edges.</p> <p>(2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas.</p> <p>(3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or openings of external walls where there is no scaffolding.</p>
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	<p>(4) Safe passageways with substantial roof, walls and floors sides shall also be provided over entrances and exits.</p> <p>(5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways, footpaths and roads, including those on areas beyond the Site boundary.</p> <p>(6) Protective roofs and covered walkways shall be provided wherever there is a risk over working areas, walkways, footpaths and roads.</p> <p>(7) All protective structures including roofs, canopies, safety fans, projecting shelves and covered walkways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p>	<p>JC: substantial or secured? What does this (substantial) mean?</p> <p>NK: substantial has meanings of firm, stable, steadfast etc.: ex. a substantial building. It is replaced with secured as right.</p> <p>JC: 落下物には関係がないように思いますがどのような意図で入っているのでしょうか。This clause (floors sides) seems to be unrelated with falling objects. What is your intention to include this?</p> <p>NK: cannot know the meaning of floors sides now, therefore delete it tentatively.</p> <p>(5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways, footpaths and roads, including those on areas beyond the Site boundary.</p> <p>(6) Protective roofs and covered walkways shall be provided wherever there is a risk over working areas, walkways, footpaths and roads.</p> <p>(7) All protective structures including roofs, canopies, safety fans, projecting shelves and covered walkways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p> <p>JC: 出典? Where does this number come from? The source?</p> <p>NK: 検討経緯書 20190710 に次の記録があります。 安全措置一般 2.6 飛来落下の防止措置(第2案) JC: 原案 2.6.1 (4)について: 「目的に合わせた」の部分は具体的に言い換えを。 NK: 安全ネット (Safety net) の目的は、作業員の墜落防止が目的であることから、メッシュシート (SHE、OSHA に記載の Debris Sheet) を物体の落下防止に使用することで統</p>	<p>(4) Safe passageways with substantial secured roof, walls and floors sides shall also be provided over entrances and exits.</p> <p>(5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways pssageways, footpaths and roads, including those on areas beyond the Site boundary.</p> <p>(6) Protective roofs and covered walkways pssageways shall be provided wherever there is a risk over working areas, walkways pssageways, footpaths and roads.</p> <p>(7) All protective structures including roofs, canopies, safety fans, projecting shelves and covered walkways pssageways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p>
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	<p>(b) Sheet shall comply with JIS A8952, composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed</p>	<p>一して、右記のように変更する。 日本では、JIS A8952-1995 建築工事用シート Fabric sheets for construction shelters が規定されている。網目の寸法 12mm である。 (i) メッシュシートは、網目の寸法 12mm 以下又は想定される落下物の落下防止に応じた網目の寸法で、落下物による破損が生じない強度を有する、物体の落下防止を目的とするものを使用すること。 The source of 12mm is JIS A8952.</p> <p>(b) Sheet shall comply with JIS A8952, composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>JICA: JICA で調べたところ JIS 以外の規格を確認できませんでした。確認いただいたうえで JIS 以外がないのであれば、この記載は削除ください。あるようであれば or equivalent といった記載を入れるようにお願いします。</p> <p>As far as the result of investigation by JICA, no standard other than JIS can be confirmed. If there is no other standard by your study either, please delete this part. If there any, insert expression such as “or equivalent”.</p> <p>MM: 2.6.2 Debris Nets (b) “JIS A8952”</p> <p>As JIS A8952 Fabric sheets for construction shelters is in Japanese only, BS 7955:1999 Containment nets and sheets on construction works, Specification for performance and test methods will be specified.</p> <p>NK: (c) is modified as right.</p> <p>(c) Sheets that are damaged or which contain any <u>irregularity</u> shall not be used;</p> <p>JC: irregularity という言葉で正しいか、再確認をお願いします。Please re-check if the expression “irregularity” is appropriate.</p> <p>NK: The original translation was “Mesh sheets that have mesh irregularities or breakage shall not be used.”. MD accepted “irregularity”. It is left as it is.</p> <p>(d) If sheet is removed temporarily <u>to suit</u> the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>JC: 英語がおかしくありませんか。Is this English (to suit) correct?</p> <p>NK: The original translation was “due to the convenience of the work”. MD’s translation is much sophisticated and expressing the situation better. It is left as it is.</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to</p>	<p>(b) Sheet shall comply with BS 7955 or equivalent composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p>
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	<p>before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p> <p>(12) When the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside the Site boundary and where there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p>	<p>prevent any reoccurrence.</p> <p>(12) When the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside the Site boundary and where there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>JC: 上での walkway とは使い分け？ How to differently use “footpaths” and “walkway” above?</p> <p>NK: foot path は現場外の小道/歩道、walkway は足場の中の通路、passageway は現場内の通路として使用します。 Following the definition below (as explained above 2.6.2 §12), JSSS will use the terms consistently. footpath: way for the use of pedestrians (BS) walkway: a portion of a scaffold platform used only for access (OSHA) passageway: means of access to the structure of a building (OSHA)</p> <p>OSHA § 1926.851 Stairs, passageways, and ladders. (a) Only those stairways, passageways, and ladders, designated as means of access to the structure of a building, shall be used. § 1926.450 Scope, application and definitions applicable to this subpart. Walkway means a portion of a scaffold platform used only for access and not as a work level.</p> <p>BS ISO 6707-1:2017 3.1.3.54 footpath: way for the use of pedestrians 3.1.3.55 footway, sidewalk, US, walkway, US: portion of a road (3.1.3.1) reserved exclusively for pedestrians Note 1 to entry: In the US, there is a homograph for the term “walkway”. See 3.2.4.4. 3.2.4 Spaces associated with circulation and movement 3.2.4.1 circulation space: space (3.2.1.1) for the movement of people, goods, or vehicles 3.2.4.2 means of access, access, US, egress, US: public or private way of approach or entrance for pedestrians or vehicles 3.2.4.3 corridor hall, US, passage, US: narrow enclosed circulation space (3.2.4.1) that gives access to rooms (3.2.1.3) or other spaces (3.2.1.1) 3.2.4.4 passage, walkway, US: narrow circulation space (3.2.4.1) bounded on both sides and intended for pedestrians 3.2.4.8 walkway, catwalk, US: construction (3.3.5.6) that provides elevated lateral access for pedestrians</p> <p>JC: いらぬんじゃない？ そもそも、境界の外は広すぎて意味ない。 Is this unnecessary “along or outside the Site”? In the first place, outside of the Site is too broad thus, it is meaningless.</p> <p>NK: There is a risk that wind bring Falling Objects to not only</p>	<p>(12) When/Where (?)the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside (?)the Site boundary and where/when (?)there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>Note: To MD, please review the (12).</p>
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<p>2.6.2 作業による飛来物による危険防止のための措置</p> <p>(1) 請負者は、飛来による危険が予想されるコンクリートの破砕作業、グラインダー等を使用する研削作業においては、次の飛来防止措置を講じなければならない。→E2.6.3(1)に規定済み</p> <p>(a) 飛来物が発生する場所を必要に応じ覆うなどの飛来防止措置を講ずること。→E2.6.3(1)(a)に規定済み</p> <p>(b) 研削作業の手順、工具の破断に伴う危険防止等の措置については、本仕様書 4.1[建設機械作業の一般的留意事項]の規定に従うこと。→E2.6.3(1)(b)に規定済み</p> <p>(c) 保護帽、保護メガネ等の飛来物による危険防止の保護具を使用させること。→E2.6.3(1)(c)に規定済み</p> <p>(2) 強風時には、本仕様書 2.7.6[強風及び暴風に対する措置]に従い、資材等の飛散防止の措置をとること。→E2.6.3(2)に規定済み</p> <p>2.6.3 物体投下による危険防止のための措置</p>	<p>2.6.3. Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p> <p>(a) Enclose areas where such operations are taking place, provide protective screens or cover storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.1 [General Notes on Construction Equipment Work] for grinding work equipment condition, use of guards and procedures for preventing danger due to tool breakage etc. and,</p> <p>MD to Coordinate with JSSS 4.1 when received</p> <p>(c) Ensure that workers use appropriate PPE such as Head, Face and Eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [Measures against Strong Wind and Storms] in this Specification.</p>	<p>along but also outside the Site. Therefore “outside” will be left as it is.</p> <p>JC: {分けるなら}when と where が逆じゃないの？どうもこの辺英語の練度がすぐ目に付くぐらい。</p> <p>If dividing the cases, the order may be “when”, then “where”.</p> <p>NK: will ask MD about order.</p> <p>JC: 不要？Unnecessary?</p> <p>NK: deleted as commented.</p> <p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs or covered walkways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and place a Spotter to direct traffic and pedestrians.</p> <p>2.6.3. Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p> <p>(a) Enclose areas where such operations are taking place, provide protective screens or cover storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.1 [General Notes on Construction Equipment Work] for grinding work equipment condition, use of guards and procedures for preventing danger due to tool breakage etc. and,</p> <p>NK: Revised as right</p> <p>(c) Ensure that workers use appropriate PPE such as Head, Face and Eye protection to prevent accident or injury.</p> <p>JC: 全て小文字に変更。All shall be changed to small letters.</p> <p>NK: Revised as right</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [Measures against Strong Wind and Storms] in this Specification.</p>	<p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs or covered walkways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and place a Spotter to direct traffic and pedestrians.</p> <p>2.6.3.Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p> <p>(a) Enclose areas where such operations are taking place, and provide protective screens or cover on storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.2 [Inspection, Maintenance and Repair] for grinding work equipment condition, use of protective covers and procedures for preventing danger due to tool breakage etc. and,</p> <p>(c) Ensure that workers use appropriate PPE such as head, face and eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [Measures against Strong Wind and Storms] in this Specification.</p>
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<p>請負者は、高所からの物体投下による請負者の要員への危険を防止するために、次の措置を行わなくてはならない。→E2.6.4(1)に規定済み</p> <p>(1) 高さ 3m以上の高所からの物体の投下を行わないこと。→E2.6.4(1)に規定済み</p> <p>(2) やむを得ず高さ 3m以上の高所から物体を投下する場合には、シュートを設けること。あわせて、立入禁止区域の設定又は監視員の配置を行うこと。→E2.6.4(2)に規定済み</p> <p>(3) シュートは、周囲に投下物が飛散しない構造とすること。→E2.6.4(3)に規定済み</p> <p>(4) シュート先端と地上との間隔は投下物が飛散しないように、シュートの長さ、勾配を考慮した設備とすること。→E2.6.4(4)に規定済み</p> <p>2.6.4 高所の作業場所の材料等の集積による危険防止のための措置</p> <p>請負者は、高所の作業場所において、材料、器具、工具等(以下、「材料等」という。)を集積する場合は、物体の落下による危険防止のために、次の措置を行わなくてはならない。→E2.6.5(1)に規定済み</p> <p>(1) 足場、鉄骨等の物体の落下しやすい高所には物を集積しないこと。→E2.6.5(1)に規定済み</p> <p>(2) 作業床端、開口部等の 1m以内には、材料等を集積しないこと。→E2.6.5(2)に規定済み</p> <p>(3) 材料等を仮置きする場合は、材料等をロープ掛けやシート掛け等により、風、振動等による落下を防止すること。→E2.6.5(3)に規定済み</p> <p>(4) 飛散しやすい物を仮置きする場合にはロープ等で緊結するか、箱、袋に収納すること。→E2.6.5(4)に規定済み</p>	<p>2.6.4. Preventive Measures against Dropped Objects</p> <p>(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. Scaffolding clips), generally and in no event from heights of 3m or above.</p> <p>(2) Alternatively, the Contractor shall provide enclosed chutes, to allow objects to be brought down from heights of 3m or above and in addition, shall prohibit entry to the area or assign a Spotter.</p> <p>(3) Chutes shall be designed to prevent objects being scattered over a wide surrounding area.</p> <p>(4) The Contractor shall adjust the distance between the chute tip and the ground by arranging the chute length and gradient so that the objects do not scatter.</p> <p>2.6.5. Prevention of Accumulation of Goods at High Levels</p> <p>(1) The Contractor shall prohibit the accumulation and storage of Goods at high levels particularly on scaffolding and steel platforms and in any event in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.</p> <p>(2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.</p> <p>(3) Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.</p> <p>(4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p>	<p>2.6.4. Preventive Measures against Dropped Dropping Objects</p> <p>JC: revised from dropped to dropping.</p> <p>(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. Scaffolding clips), generally and in no event from heights of 3m or above.</p> <p>(2) <u>Alternatively, the Contractor may provide enclosed chutes, to allow objects to be brought down from heights of 3m or above and in addition, shall prohibit entry to the area or assign a Spotter.</u></p> <p>JC: 現在の建築の世界で物を下す際には、シュートではなくクレーンで釣っておろす筈ですので、まずそれについて(2)で論じるようにお願いします。そのうえで alternative としてシュートがあるという記載をお願いします。</p> <p>At present, for bringing objects down from height, it is common to use a crane not a chute. So, describe crane first, then as an alternative way, describe in (2) that a chute can be used.</p> <p>NK: Modified as right.</p> <p>(3) Chutes shall be designed to prevent objects being scattered over a <u>wide</u> surrounding area.</p> <p>(4) <u>The Contractor shall adjust the distance between the chute tip and the ground by arranging the chute length and gradient so that the objects do not scatter.</u></p> <p>JC: (3) "wide" is deleted. (4) all is deleted.</p> <p>NK: Deleted as commented.</p> <p>2.6.5. Prevention of Accumulation of Goods at High Levels Height</p> <p>(1) The Contractor shall prohibit the accumulation and storage of Goods at height particularly on scaffolding and <u>steel platforms</u> and <u>in any event</u> in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.</p> <p>JC: 必要でしょうか? Is it ("in any event") necessary?</p> <p>NK: Deleted as commented. To MD, please review this deletion.</p> <p>NK: (1) in Japanese specifies steel frames which is under assembling, so (1) is modified as right.</p> <p>(2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.</p> <p>(3) <u>Goods</u> shall be restrained by ropes or sheets to prevent them from falling or slipping.</p>	<p>2.6.4. Preventive Measures against Dropping Objects</p> <p>(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. scaffolding clips), generally and in no event from heights of 3m or above.</p> <p>(2) <u>The Contractor shall use a crane to bring objects down from height of 3m or above.</u> Alternatively, the Contractor may provide enclosed chutes <u>to bring down objects</u> and in addition, shall prohibit entry to the <u>chute</u> area or assign a Spotter.</p> <p>(3) Chutes shall be designed to prevent objects being scattered over a <u>wide</u> surrounding area.</p> <p>2.6.5. Prevention of Accumulation of Goods at High Levels Height</p> <p>(1) The Contractor shall prohibit the accumulation and storage of Goods at height particularly on scaffolding and steel <u>platforms frames under assembling</u> and <u>in any event (?)</u> in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.</p> <p>(2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.</p>
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<p>2.6.5 上下作業時の落下物による危険防止のための措置</p> <p>請負者は、原則として上下作業は行ってはならない。但し、やむを得ず実施する場合は以下の措置を講じなければならない。→E2.6.6(1)に規定済み</p> <p>(1) 事前に上下作業の責任者間で作業の場所、内容、時間等をよく調整し、安全確保を図ること。→E2.6.6(1)に規定済み</p> <p>(2) 本仕様書 2.6.1[物体の落下による危険防止のための措置]および 2.6.4[高所の作業場所の材料等の集積による危険防止のための措置]に規定する措置に加えて、工具、材料等を落下させないように、上部で作業を行う作業員につり網、つり袋等を使用させる等の安全確保を講ずること。→E2.6.6(2)に規定済み</p> <p>(3) 危険防止措置の実施が困難な場合には、監視員を適宜配置すること。→E2.6.6(2)に規定済み</p>	<p>2.6.5 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>	<p>JC: When temporarily stored at height, 日本語に併せて仮置きする場合には、という条件を入れてください。</p> <p>Add the expression of “When temporarily stored at height,” as a condition according to Japanese draft.</p> <p>NK: Added as commented.</p> <p>(4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.5 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit <u>his</u> workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between <u>his assigned workers</u>.</p> <p>JC: Contractor’s personnel ではないでしょうか? Isn’t this (his workers) “Contractor’s Personnel”?</p> <p>NK: It is the theme of this section to prohibit working above or below other workers. Thus, instead of using “Contractor’s Personnel” which includes everyone from the Contractor’s Representative, HSO to other all personnel, it is considered to be more appropriate to limit to workers. Therefore, no change is made.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>	<p>(3) When temporarily stored at height, Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.</p> <p>(4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.6 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>
<p>2019.9.5 暫定セット版 R1</p> <p>2.7 悪天候及び地震時の対策</p> <p>2.7.1 悪天候及び地震時の緊急事態対応計画 →規定なし(下記 2.7.3 参照)</p> <p>請負者は、本仕様書 1.10[緊急事態対応計画及び緊急通報体制]の規定に従い、本節 2.7.4(1)に規定する強風、暴風、大雨、大雪、雷、地震を対象にした緊急事態対応計画を、作成しなければならない。</p> <p>大雨により土石流、異常出水、斜面崩壊、落石等が見られる現場においては、緊急事態対応計画に、それ</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1. General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(2) Adverse climatic conditions and other conditions described in this Section are deemed to be foreseeable conditions within the Contractors control and they shall not be construed as constituting a cause of delay giving</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1. General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(2) <u>Adverse climatic</u> conditions and other conditions described in this Section are <u>deemed to be foreseeable</u> conditions within the Contractors control and they shall not be construed as constituting a cause of delay</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1. General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(2) Adverse climatic conditions and other conditions described in this Section are deemed to be foreseeable conditions within the Contractors control and they shall not be construed as constituting a cause of delay giving</p>

<p>らへの対応を記載しなければならない。</p> <p>2.7.2 悪天候及び地震に備えた準備と点検 →規定なし (下記 2.7.3 参照)</p> <p>請負者は、悪天候及び地震に備え、次の準備を行わなくてはならない。</p> <p>(4) 気象及び地震情報を常時テレビ、ラジオ、インターネット等で入手すること。</p> <p>(5) 電話、無線機、トランシーバー、拡声器、サイレン等、緊急時の連絡設備を常備すること。かかる連絡設備は、緊急時に使用できるよう常に点検整備しておくこと。</p> <p>(6) 停電に対応できるように非常電源設備を設置し、定期的に点検整備をしておくこと。</p> <p>(7) 悪天候及び地震時の退避場所や避難ルートについて計画し、請負者の要員に周知しておくこと。</p> <p>(8) 悪天候、地震及び津波に関する情報の伝達、及び請負者の要員のとるべき行動に関し、本仕様書 1.10 (3)に規定する訓練を行うこと。</p>	<p>any entitlement to extension of time under GCC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's obligations or entitlements under the Contract.</p> <p>2.7.2. Preventive Measures</p> <p>(1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.</p> <p>(2) During or after adverse climatic conditions, the Contractor shall:</p> <p>(a) Stop work at heights if there is any danger of falling;</p> <p>(b) Stop work if there is a possibility of that such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;</p>	<p>giving any entitlement to extension of time under GC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's <u>obligations or entitlements</u> under the Contract.</p> <p>JC: 日本語の「(悪天候が) 予見される現場」の訳として foreseeable といった表現は不適當。GC の関連条項をイメージさせる foreseeable や adverse climatic conditions といった表現は使わないようにしてください。bad weather や likely など、一般的な表現でおさめるようお願いします。(タイトルも修正願います) 全体的に修正をお願いします。</p> <p>The expression of “foreseeable” is improper as the translation of Japanese draft in which such a case that an adverse weather is predicted/expected.</p> <p>Do not use expression such as “foreseeable” or “adverse climatic conditions” that may associate with force majeure in GC.</p> <p>Please use general expression such as “bad weather” or “likely”. Modify as a whole including the title of sections, too.</p> <p>MM: 2.7. Adverse Weather Requirements 2.7.1 General</p> <p>JICA commented the adverse weather, foreseeable, etc. will not be used and replaced with other wording.</p> <p>NK explained that it is important to use such terms to avoid conflict with the extension of time and force majeure clauses of the contract. GC 8.4 (c) mentions “exceptionally adverse climatic conditions”, and “Unforeseeable” is defined.</p> <p>“adverse climatic conditions” and foreseeable have been selected to stay within the contract and NK recommend that these are not changed.</p> <p>NK: (2) is left as it is.</p> <p>2.7.2. Preventive Measures</p> <p>(1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.</p> <p>JC: 英語がおかしくないでしょうか。Is this “it” correct? NK: この it は render に必要な形式目的語としての it と考えられます。This seems an it as a formal object required for render, so it is left as it is.</p> <p>(2) During or after adverse climatic conditions, the Contractor shall:</p> <p>(a) Stop work at heights if there is any danger of falling;</p> <p>(b) Stop work if there is a possibility of that such work may be dangerous due</p>	<p>any entitlement to extension of time under GC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's obligations or entitlements under the Contract.</p> <p>2.7.2. Preventive Measures</p> <p>(1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.</p> <p>(2) During or after adverse climatic conditions, the Contractor shall:</p> <p>(d) Stop work at heights if there is any danger of falling;</p> <p>(e) Stop work if there is a possibility of that</p>
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2.7.3 気象及び地震情報の収集と対応

請負者は、気象及び地震情報の収集と気象の変化及び地震の発生に対応するため、次の措置を講じなければならない。

(9) 本仕様書 2.7.4 (1)(a)から(d)に示す強風、暴風、大雨、大雪、もしくはそれに準ずる天候(以下、「悪天候」という。)が予想されるときは、継続的に降雨量や風速等の悪天候に係わる気象情報を確認すること。

(10) 気象及び地震情報に基づき、必要に応じて本仕様書 2.7.4 から 2.7.9 に記載の対応をとること。また、本仕様書 1.10 (2)に規定する緊急連絡表で指定された関係者に通知すること。

→上記 2.7.1～2.7.3 規定なし。→理由:MD 氏説明は次です。

Why is bad weather an emergency? The contractor has an obligation to be aware and allow for ALL weather conditions except “exceptionally adverse conditions and also for Force Majeure (including earthquakes, typhoons hurricanes, etc.). A safety specification should not interfere with the careful balance of FIDIC by introducing “Emergency Response” in this manner. This is not “emergency” in general it is precautions against bad weather which is foreseeable and normal.

Please refer to added JSSS 1.23 and the definition of Landslide etc. I suggest that this Section 2.7 is now not really necessary except perhaps for the items left in this edited section.

Contact, communications, training etc. are already in 1.2.9. (後略) 以上のように、Force Majeure との関係あるいは他節の項目との重複により削除されている。→(NK の方針: このまま規定なしとする。)

2.7.4 作業の中止と再開

請負者は、悪天候及び地震により事故が発生することを防ぐために、次の措置を講じなければならない。

(11) 当該国の法律に定めがない限り、悪天候及び地震による作業の中止の基準は次を目安として定めること。→以下(a)～(e)規定なし。理由: I am really

not sure of the practical or legal application of the following criteria which will vary around the world in terms of regular or exceptional adverse conditions and which may also affect the legal/contractual interpretation of extension of time and force majeure.

(中略) In whose opinion for example is say 9.99 m/sec OK? What if this causes damage on the site? It can provide a basis and criteria for claim as this is effectively saying that the Contractor has no obligation to protect for lower conditions. (中略)

The criteria of what is normal or exceptional will vary according to the country and the contractor should in any event price and plan for any such measures that can be anticipated in the country.→

(NK の方針: このまま規定なしとする。)

(a) 強風: 10 分間の平均風速が毎秒 10 メートル以上の風

(d) 暴風: 瞬間風速が毎秒 30 メートルを超える風

(c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [Prohibition of Entry – Dangerous Work], inform the Engineer accordingly and request his instructions; and

(d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor’s Equipment and Temporary Works only after making the necessary repairs.

to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;

(c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [Prohibition of Entry – Dangerous Work], inform the Engineer accordingly and request his instructions; and

(d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor’s Equipment and Temporary Works only after making the necessary repairs.

such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;

(f) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [Prohibition of Entry – Dangerous Work], inform the Engineer accordingly and request his instructions; and

(g) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor’s Equipment and Temporary Works only after making the necessary repairs.

<p>(e) 大雨: 1回の降雨量が50ミリメートル以上の雨</p> <p>(f) 大雪: 1回の降雪量が25センチメートル以上の雪</p> <p>(g) 地震: メルカリ震度階VI以上の地震</p> <p>(12) 天気予報等であらかじめ上記基準を超える悪天候が予想される場合は、緊急事態対応計画に従い、作業中止を含めた対応策の準備を行っておくこと。→規定なし。→理由不明。請負者が当然行うことであるから記述する必要はないと考えられる。→(NKの方針: このまま規定なしとする。)</p> <p>(13) 悪天候のときは 2m 以上の高所作業を中止すると共に、その旨エンジニアに通知すること。→E2.7.2(a)に記述済み</p> <p>(14) 降雨、降雪及び霧発生時の視界不良により、作業に危険を及ぼす可能性がある場合は、当該作業を中止すると共に、その旨エンジニアに通知すること。→E2.7.2(b)に記述済み</p> <p>(15) 悪天候又は地震発生後に作業を再開する前には、構造物(仮設を含む)に危険がないかを点検すること。危険箇所が発見された場合には、すみやかに危険箇所に立入禁止措置を講じ、その旨をエンジニアに通知すること。→E2.7.2(c)に記述済み</p> <p>(16) 悪天候又は地震発生後に作業を再開する前には、建設機械に危険がないかを点検すること。危険が発見された場合には、必要な修理を施した上で使用すること。→E2.7.2(d)に記述済み</p> <p>2.7.5 大雨に対する措置</p> <p>請負者は、作業現場及び周辺では、2.7.4(1)に規定する大雨に対し、次の措置を講じなければならない。→E2.7.3に記述済み</p> <p>(17) 次のような箇所は、下記(2)から(4)の対策及び立入禁止の措置を講ずること。→E2.7.3(1)に記述済み</p> <p>(b) 土砂崩れ、がけ崩れ、地すべりの発生のおそれがある箇所及び土石流の到達のおそれがある箇所→E2.7.3(1)(a)に記述済み</p> <p>(h) 資機材の流出、土砂の流出のおそれがある箇所→E2.7.3(1)(b)に記述済み</p> <p>(i) 河川の氾濫等により浸水のおそれがある箇所→E2.7.3(1)(c)に記述済み</p> <p>(18) 流出のおそれのある資機材等は、安全な場所に移動する等流出防止の措置を講じること。→E2.7.3(2)に記述済み</p> <p>(19) 大型機械の設置してある場所で、機械等の冠水又は流出、地盤のゆるみによる転倒のおそれがある場合は、適切な場所への退避又は転倒防止措置を講じること。→E2.7.3(2)に記述済み</p> <p>(20) 冠水又は流出のおそれがある仮設物は、撤去するか、水裏から仮設物内に水を呼び込み内外水位差による倒壊を防ぐか、補強するなどの措置を講じること。→E2.7.3(3)に記述済み</p>	<p>2.7.3. Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prohibit entry in accordance</p>	<p>2.7.3. Measures for Heavy Rain</p> <p>JC: 日本語版では暴風、大雨等、各現象に応じて作業中止基準が数値ともに定められていましたが、それが消えている理由を教えてください。</p> <p>There are criteria with figures for discontinuing works due to strong wind, heavy rain, etc. in the Japanese draft. Please explain the reason for eliminating those criteria.</p> <p>MM: 2.7.3 to 2.7.7 Criterion for work stoppage</p> <p>NK explained that foreseeable weather and earthquake conditions vary according to each different country which is why FIDIC do not list any criteria. Criteria for stopping works in JSSS is not recommended even as an indication.</p> <p>The Contractor shall determine their criteria for stopping work based on the climactic data at the Bidding stage and stop when the HSO feels that it is not safe to continue according to conditions at the time. The Engineer may also instruct the Contractor to stop if he feels that it is unsafe.</p> <p>NK recommend leaving as it is</p> <p>NK: 2.7.3 is left as it is.</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prohibit entry in accordance</p>	<p>2.7.3. Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p>
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<p>2.7.6 強風及び暴風に対する措置</p> <p>請負者は、作業現場及び周辺では、2.7.4(1)で規定する強風又は暴風に対し、次の措置を講じなければならない。→E2.7.4に記述済み</p> <p>(21) クレーン、杭打機等のような風圧を大きく受ける大型建設機械には、転倒、逸走防止の措置を講じること→E2.7.4(1)に記述済み</p> <p>(22) 大型建設機械は、高圧電線の大きな振れによる接触が発生しないように、電線類から十分な距離をとって退避させておくこと。→E2.7.4(2)に記述済み</p> <p>(23) 足場に対して、次の対策を行うこと。→E2.7.4(3)に記述済み</p> <p>(c) 風荷重が大きくなるメッシュシート等の撤去又はたたむこと→E2.7.4(3)(a)に記述済み</p> <p>(j) 足場等の滑動防止、壁つなぎの補強等→E2.7.4(3)(b)に記述済み</p> <p>(k) 建築物より突出している足場等の控え索や控え材等での補強→E2.7.4(3)(c)に記述済み</p> <p>(l) 足場にある資材等の固縛又は地上への移動→E2.7.4(3)(d)に記述済み</p> <p>(24) 高所作業での作業を中断すること。また、物の飛散が予想されるときは、飛散防止措置を施すこと。→E2.7.4(4)(5)に記述済み</p>	<p>with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations:</p> <p>(a) Places where Landslides could be anticipated;</p> <p>(b) Places where there is a risk of flow of material and equipment and soil runoff; and</p> <p>(c) Places where there is a risk of damage due to flash floods, lake or river flooding.</p> <p>(2) Take measures such as evacuation of Contractor’s Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.</p> <p>(3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.</p> <p>2.7.4. Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prevent capsize, collapse, overturn or movement of Contractor’s Equipment particularly cranes and pile drivers.</p> <p>(2) Always store and/or if necessary evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury.</p> <p>(3) Take the following measures for scaffolding and working platforms.</p> <p>(a) Remove or furl mesh sheets to reduce wind load;</p> <p>(b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors;</p> <p>(c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and</p> <p>(d) Securing Goods on scaffolding, or lowering them to ground level.</p> <p>(4) Discontinue work at in elevated places; and</p> <p>(5) Take measures to prevent scattering of Goods, waste and debris.</p>	<p>with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations:</p> <p>(a) Places where Landslides could be anticipated;</p> <p>(b) Places where there is a risk of flow of material and equipment and soil runoff; and</p> <p>(c) Places where there is a risk of damage due to flash floods, lake or river flooding.</p> <p>(2) Take measures such as evacuation of Contractor’s Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.</p> <p>(3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.</p> <p>2.7.4. Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prevent capsize collapse, overturn or movement of Contractor’s Equipment particularly cranes and pile drivers.</p> <p>JC: overturn で十分 “Overturn” is better here as a more understandable wording. NK: replaced as commented.</p> <p>(2) Always store and/or if necessary evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury.</p> <p>(3) Take the following measures for scaffolding and working platforms.</p> <p>(a) Remove or furl mesh sheets to reduce wind load;</p> <p>(b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors;</p> <p>(c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and</p> <p>(d) Securing Goods on scaffolding, or lowering them to ground level.</p>	<p>(1) Take measures to prohibit entry in accordance with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations:</p> <p>(a) Places where Landslides could be anticipated;</p> <p>(b) Places where there is a risk of flow of material and equipment and soil runoff; and</p> <p>(c) Places where there is a risk of damage due to flash floods, lake or river flooding.</p> <p>(2) Take measures such as evacuation of Contractor’s Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.</p> <p>(3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.</p> <p>2.7.4. Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prevent collapse, overturn or movement of Contractor’s Equipment particularly cranes and pile drivers.</p> <p>(2) Always store and/or if necessary evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury.</p> <p>(3) Take the following measures for scaffolding and working platforms.</p> <p>(a) Remove or furl mesh sheets to reduce wind load;</p> <p>(b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors;</p> <p>(c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and</p> <p>(d) Securing Goods on scaffolding, or lowering them to ground level.</p> <p>(4) Discontinue work at in elevated places; and</p>
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<p>2.7.7 雪に対する措置</p> <p>請負者は、積雪のある作業現場及び周辺では、積雪に対し次の措置を講じなければならない。→E2.7.5 に記述済み</p> <p>(25) 道路、水路等には幅員を示すためのポール、赤旗の設置等の転落防止措置を講じること。→E2.7.5(1)に記述済み</p> <p>(26) 現場内の道路、工事用栈橋、階段、スロープ、通路、作業足場等の除雪等の作業員の転倒防止措置を講じること。→E2.7.5(2)に記述済み</p> <p>(27) 付着した雪の除去など標識、掲示板等を見やすくすること。→E2.7.5(3)に記述済み</p> <p>(28) 足場や構台上に積雪あるいは着氷がある場合は、雪や氷の除去作業以外の作業を禁止すること。→E2.7.5(4)に記述済み</p> <p>2.7.8 雷に対する措置</p> <p>請負者は、雷発生時の作業に関して、次の措置を講じなければならない。</p> <p>(29) 雷検知器、ラジオ受信機等により雷雲の発生や接近の情報を入手した時は、必要に応じて2.7.3(2)で規定の設備を用いて作業員に速やかに周知すること。→E2.7.6(1)に記述済み。(ただし内容は多少変更有り。)</p> <p>(30) 雷光もしくは雷鳴が観測されたときは、直ちに作業を中止し、作業員を雷に対し安全な場所に避難させること。→E2.7.6(2)に記述済み。(ただし内容は多少変更有り。)</p> <p>(31) 雷光と雷鳴の間隔が長くなるまで作業を再開しないこと。→E2.7.6(3)に記述済み</p> <p>(32) 雷発生時の警報(作業中止、退避等)、連絡方法を定め、作業中止又は退避の場所等に関する措置を適切な所に看板等で示しておくこと。→E2.7.6(3)に記述済み</p>	<p>2.7.5. Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways.</p> <p>(2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like.</p> <p>(3) Remove snow from roofs, canopies and signs, notice boards.</p> <p>(4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal.</p> <p>2.7.6. Measures for Lightning</p> <p>(1) Lightning is a serious occupational hazard and outside work on or near tall objects, or near explosives or conductive materials have significant risks.</p> <p>(2) The Contractor shall follow the recommendations of OSHA and when thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(3) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p>	<p>(4) Discontinue work at in elevated places; and JC: Is "Suspend" more usual? NK: To avoid basis of claim in relation with GC 16 Suseptin and Termination by Contractor, discontinue is used instead of suspension.</p> <p>(5) Take measures to prevent scattering of Goods, waste and debris.</p> <p>2.7.5. Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways.</p> <p>(2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like.</p> <p>(3) Remove snow from roofs, canopies and signs, notice boards.</p> <p>(4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal.</p> <p>2.7.6. Measures for Lightning</p> <p>(1) Lightning is a serious occupational hazard and outside work on or near tall objects, or near explosives or conductive materials have significant risks. JC: 解説のため不要。This is an explanation. Unnecessary. NK: Deleted.</p> <p>(2) The Contractor shall follow the recommendations of OSHA and when thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>JC: Deleted.</p> <p>(3) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p> <p>JC: 30 分の根拠(どこかで定められているのでしょうか)を教えてください。Please clarify the basis of "30 minutes". Is it stipulated in some standard?</p>	<p>(5) Take measures to prevent scattering of Goods, waste and debris.</p> <p>2.7.5. Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways.</p> <p>(2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like.</p> <p>(3) Remove snow from roofs, canopies and signs, notice boards.</p> <p>(4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal.</p> <p>2.7.6. Measures for Lightning</p> <p>(1) When thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(2) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p>
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<p>2.7.9 地震及び津波に対する措置</p> <p>請負者は、地震発生後、津波に対して関係当局が警報を出した場合、又は津波発生が見られる場合は、決められた避難場所へ作業員を避難させなければならぬ。→E2.7.7 に記述済み</p>	<p>2.7.7. Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event or earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p> <p>2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Perform a visual inspection as specified in JSSS エラー! 参照元が見つかりません。 [Inspection and Monitoring] (2) Check all measured values of any instruments. (3) Recalibrate and replace as necessary. (4) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary. (5) Keep the Engineer informed. 	<p>MM: 2.7.6 Lightning NK will mention it is OSHA recommendation.</p> <p>NK: OSHA Fact Sheet Lightning Safety When Working Outdoors https://www.osha.gov/Publications/OSHA3863.pdf mentions as follows: Seek Shelter in Buildings: remain in the shelter for at least 30 minutes after hearing the last sound of thunder.</p> <p>2.7.7. Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event or earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p> <p>2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>JC: 本節も確認する必要があると思います。日本語版の 2.7.4 (5)の内容を復活させる必要があると思います。 This clause needs to be confirmed. It is deemed to resurrect the content of 2.7.4 (5) of the Japanese version.</p> <p>NK: In 2.7.2.(c) above, there is the following provision. Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry...</p> <p>NK: As specified already, no addition is made here.</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Perform a visual inspection as specified in JSSS XXXX [Inspection and Monitoring] (2) Check all measured values of any instruments. <p>JC: どのような意味でしょうか。計器類が壊れていないか確認せよという意味でしょうか。(2)と(3)が関連しているのであれば、一緒に記載してはいいかがでしょうか。 What does this mean? It means that instruments shall be checked for its function and defect etc.? Clause (2) and (3) may be combined if they are related each other.</p> <p>NK: This means that the Contractor shall check if abnormality occurred or not on Temporary Works/structures by judging the values (data) measured by the instruments provided on/in TW. It does not mean to check damage occurrence in instruments.</p> <p>(3) Recalibrate and replace as necessary.</p> <p>NK: (3) specifies that if measured values are abnormal due to the damage or out of order of instruments, recalibrate and</p>	<p>2.7.7. Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event or earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p> <p>2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Perform a visual inspection as specified in JSSS 7.1.3 [Inspection and Monitoring] (2) Check all measured values of any instruments to ensure the safety of TW. When abnormality is found in instruments, recalibrate and or replace them as necessary.
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		<p>replace them. (2) and (3) are modified and combined as right.</p> <p>(4) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary.</p> <p>(5) Keep the Engineer informed.</p> <p>JC: of what informed? NK: modified as right.</p>	<p>(3) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary.</p> <p>(4) Keep the Engineer informed of inspection and monitoring results of TW.</p>
<p>2.8 火災予防</p> <p>2.8.1 一般</p> <p>請負者は工事現場における火災予防については、当該国の法律に従い、法律に加え本仕様書を含む契約で別途の要求がある場合には、これに従わなければならない。→E2.8.1に記述済み。(1.22 Fire Preventionの規定に加えて下記に従うとの記述になっている。</p> <p>2.8.2 消防体制の確立</p> <p>請負者は、請負者の事務所、仮設建物、仮設備、寄宿舎、仮設工事の構造物及び工事中の本設工事の構造物等(以下、本節においては「事務所等」という。)に関し、次の消防体制を確立しなければならない。→E2.8.2に記述済み</p> <p>(33) 事務所等の消防計画を、本仕様書 1.10[緊急事態対応計画及び緊急通報体制]の緊急事態対応計画の一部として作成し、エンジニアに提出すること。同消防計画は本仕様書 2.8.3 から 2.8.6 に規定の事項を含んだものとする。→E2.8.2(1)に記述済み</p> <p>(34) 消防および火災発生時の避難に係る責任者を指名すること→E2.8.2(2)に記述済み</p> <p>(35) 消防訓練計画を作成し、消防計画に含めること。訓練を実施した場合はその記録を保管すること。→E2.8.2(3)(4)に記述済み</p> <p>2.8.3 防火及び消火のための措置</p>	<p>2.8 FIRE PREVENTION – ADDITIONAL REQUIREMENTS</p> <p>2.8.1. General</p> <p>Further to the requirements of JSSS 1.22 [<i>Fire Prevention</i>] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>2.8.2. Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required by the Bidding Documents), temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as “temporary facilities” in this Section).</p> <p>For this purpose, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prepare a fire-fighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan. (2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire. (3) Prepare a firefighting training plan as a part of the firefighting plan. (4) Carry out all training and keep records of such training in accordance with JSSS 1.17.5 [<i>Records of Education and Training</i>]. <p>2.8.3. Measures of Fire Prevention and Firefighting</p>	<p>2.8 FIRE PREVENTION—ADDITIONAL REQUIREMENTS</p> <p>2.8.1. General</p> <p>Further to the requirements of JSSS 1.22 [<i>Fire Prevention</i>] the Contractor shall provide the additional fire preventive measures described in this Section.</p> <p>JC: 1.22 Fire Prevention を削除して、本節に統合願います。 Delete 1.22 [Fire Prevention] and integrate its content into this section</p> <p>NK: 2.8.6 [Additional Service Requirement] is added, transferring from 1.22 [Fire Prevention]. The title of 2.8 and the sentence in 2.8.1 are revised accordingly.</p> <p>2.8.2. Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required by the Bidding Documents), temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as “temporary facilities” in this Section).</p> <p>JC: bidding ではなく contract. This is not “Bidding but “Contract”.</p> <p>NK: revised as right.</p> <p>For this purpose, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prepare a fire-fighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan. (2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire. (3) Prepare a firefighting training plan as a part of the firefighting plan. (4) Carry out all training and keep records of such training in accordance with JSSS 1.17.5 [<i>Records of Education and Training</i>]. <p>2.8.3. Measures of Fire Prevention and Firefighting</p>	<p>2.8 FIRE PREVENTION</p> <p>2.8.1. General</p> <p>The Contractor shall provide the fire preventive measures described in this Section.</p> <p>2.8.2. Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required in the Contract), temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as “temporary facilities” in this Section).</p> <p>For this purpose, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prepare a firefighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan. (2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire. (3) Prepare a firefighting training plan as a part of the firefighting plan. (4) Carry out all training and keep records of such training in accordance with JSSS 1.17.5 [<i>Records of Education and Training</i>]. <p>2.8.3. Measures of Fire Prevention and Firefighting</p>

<p>請負者は、事務所等の防火及び消火のために、以下の措置を講じなければならない。→E2.8.3 に記述済み</p> <p>(36) 現場内では、指定場所以外での喫煙を禁止し、喫煙場所には水を入れたバケツを設置するなど防火を徹底すること。→E2.8.3(1)に記述済み</p> <p>(37) 消火栓、消火器等の設備は、初期消火に充分なものとする。→E2.8.3(2)に記述済み</p> <p>(38) 火気を取扱う場所には、普通火災用、油火災用、電気火災用等の用途に応じた消火器等消火設備を備えること。消火器は定期的点検し、有効期間を過ぎたものは交換すること。→E2.8.3(4)に記述済み</p> <p>(39) 火災発生時には消防隊が円滑に活動を行うための誘導・支援を行うこと。→E2.8.3(5)に記述済み</p> <p>2.8.4 避難のための措置</p> <p>請負者は、火災時の避難を容易にするために、次の措置を講じなければならない。→E2.8.4 に記述済み</p> <p>(40) 必要に応じ避難経路図を作成し、見やすい場所に掲示すること。→E2.8.4(1)に記述済み</p> <p>(41) 現場においては必要に応じ避難経路を標示すること。→E2.8.4(2)に記述済み</p> <p>(42) 2 階以上の建物で収容人員が 30 人以上の場合、または立坑及び地下工事の場合には複数の避難経路を設置すること。→E2.8.4(3)に記述済み</p> <p>(43) 火災発生時に避難が必要な現場内の要員に、火災発生の実を周知できる連絡方法を定めておくこと。→E2.8.4(4)に記述済み</p> <p>2.8.5 可燃物の管理</p> <p>請負者は、火災発生の危険性が高いガソリン、アセトン、トルエン等の有機溶剤、灯油、軽油、重油、クレオソート油、ギヤー油、シリンダー油等の潤滑油等の可燃物(以下、本款においては「可燃物」という。)の貯蔵及び管理については、当該国の法律に従わなければならない。また、次の措置を講じなくてはならない。→E2.8.5</p>	<p>For fire prevention and fire-fighting in the temporary facilities, the Contractor shall:</p> <ol style="list-style-type: none"> Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking areas. Provide fire extinguishers and if necessary fire hydrants with temporary water supply. Different types of fire extinguishers shall be provided according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like. Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer. Train Contractors Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available) otherwise provide the services required by JSSS 1.22 [Fire Prevention]. <p>2.8.4. Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p> <ol style="list-style-type: none"> Creating an evacuation route map if necessary and post this in easy-to-see places. Display the evacuation route as necessary at the work places. Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work. Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire. <p>2.8.5. Management of Flammable and Combustible Materials</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and</p>	<p>For fire prevention and firefighting in the temporary facilities, the Contractor shall:</p> <ol style="list-style-type: none"> Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking areas. Provide fire extinguishers and if necessary fire hydrants with temporary water supply. Different types of fire extinguishers shall be provided according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like. Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer. Train Contractor's Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available) otherwise provide the services required by JSSS 1.22 [Fire Prevention]. <p>JC: deleted.</p> <p>2.8.4. Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p> <ol style="list-style-type: none"> Creating an evacuation route map if necessary and post this in easy-to-see places. Display the evacuation route as necessary at the work places. Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work. Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire. <p>2.8.5. Management of Flammable and Combustible Materials</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and</p>	<p>For fire prevention and firefighting in the temporary facilities, the Contractor shall:</p> <ol style="list-style-type: none"> Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking areas. Provide fire extinguishers and if necessary fire hydrants with temporary water supply. Different types of fire extinguishers shall be provided according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like. Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer. Train Contractor's Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available) otherwise provide the services required by JSSS 1.22 [Fire Prevention]. <p>2.8.4. Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p> <ol style="list-style-type: none"> Creating an evacuation route map if necessary and post this in easy-to-see places. Display the evacuation route as necessary at the work places. Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work. Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire. <p>2.8.5. Management of Flammable and Combustible Materials</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures referring to comply with the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and combustible materials</p>
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<p>に記述済み</p> <p>(44) 危険物を貯蔵又は取扱う場合には、責任者を指名し、エンジニアに通知すること。</p> <p>(45) 上記責任者は、可燃物の取り扱いについて十分な経験と能力を確認できる者とする。また、当該国の法律で関連の資格が要求される場合は、当該資格を有する者でなければならない。→E2.8.5(1)に記述済み</p> <p>(46) 可燃物は直射日光を避け、通風換気の良いところに貯蔵し、貯蔵場所には、立入禁止の措置を講じ、かつ火気使用禁止の標示をすること。→E2.8.5(2)(3)に記述済み</p> <p>(47) 可燃物の取扱方法を定め、エンジニアに通知するとともに請負者の要員への周知徹底を図ること。→E2.8.5(4)に記述済み</p> <p>2.8.6 溶接・溶断による火災の予防</p> <p>溶接、溶断作業による火災の予防に関しては、本仕様書 7.9[電気溶接・ガス切断作業]の規定に従うこと。→E2.8.6に記述済み</p>	<p>combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).</p> <p>In addition, the Contractor shall:</p> <ol style="list-style-type: none"> Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer. Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight, Take measures to prohibit entry to non-authorised personnel and display signage prohibiting the use of flame. Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor’s Personnel. Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials. 	<p><u>combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards</u> for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).</p> <p>JC: OSHA の関連規定、ここで言及するのが適切か再確認願います。 Please re-confirm if referring to relevant provisions of OSHA is appropriate here or not.</p> <p>NK: Stipulation of complying with OSHA will impose the Contractor difficult obligations for storing even small amount of fuel, etc. It is considered appropriate to revise this part as right from “comply with” to “referring to”.</p> <p>In addition, the Contractor shall:</p> <ol style="list-style-type: none"> Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer. Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight, Take measures to prohibit entry to non-authorised personnel and display signage prohibiting the use of flame. Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor’s Personnel. Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials. <p>2.8.6. Additional Service Requirement (moved from JSSS 1.22)</p> <p>Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, and if so specified in the Particular Safety Specification, the Contractor shall be responsible for providing additional services</p>	<p>or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).</p> <p>In addition, the Contractor shall:</p> <ol style="list-style-type: none"> Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer. Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight, Take measures to prohibit entry to non-authorised personnel and display signage prohibiting the use of flame. Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor’s Personnel. Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials. <p>2.8.6. Additional Service Requirement</p> <p>Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, and if so specified in the Particular Safety Specification, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor’s Personnel and Employer’s</p>
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	<p>2.8.6. Fire Prevention Measures for Gas Welding and Gas Cutting</p> <p>The Contractor shall refer to and comply with JSSS 7.9 [Welding and Gas Cutting Works] for the fire prevention requirements for welding and gas cutting works.</p> <p>To be coordinated later after receipt of JSSS 7.9</p>	<p>and facilities at the Site as are necessary to fully protect all Contractor's Personnel and Employer's Personnel, to compensate for any such lack of available public services or facilities.</p> <p>(1) Such additional facilities may include sufficient temporary water and power supply to maintain emergency use.</p> <p>(2) Enhanced fire protection equipment and facilities around the Site.</p> <p>2.8.7. Fire Prevention Measures for Gas Welding and Gas Cutting</p> <p>JC: gas welding はほとんどやらないと理解。7.9 に合わせる。 Gas welding is seldom used actually. Match with JSSS 7.9.</p> <p>NK: 7.8 specifies "Electric and Gas Welding and Cutting". Title is changed as right.</p> <p>The Contractor shall refer to and comply with JSSS 7.9 [Welding and Gas Cutting Works] for the fire prevention requirements for welding and gas cutting works.</p>	<p>Personnel, to compensate for any such lack of available public services or facilities.</p> <p>(1) Such additional facilities may include sufficient temporary water and power supply to maintain emergency use.</p> <p>(2) Enhanced fire protection equipment and facilities around the Site.</p> <p>2.8.7. Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>The Contractor shall refer to and comply with JSSS 7.8 [Electric and Gas Welding and Cutting] for the fire prevention requirements for electric and gas welding and cutting works.</p>
<p>019.5.14 暫定セット版</p> <p>2.9 現場管理 → 2.9 個人用保護具(以下、節番号は繰上げ)</p> <p>2.10.1 保護具の着用と使用</p> <p>(1) 一般事項 →(a)~(c)規定なし。(理由等下記参照)</p> <p>(a) 請負者は、作業に携わるものに、作業に適した服装を身につけさせるとともに、保護具を携帯させ、必要時には必ず使用させなければならない。</p> <p>(a) 請負者は、本仕様書 1.2.2[引用基準]に従い、下記に規定の保護具を作業員に使用させなければならない。</p> <p>(b) 請負者は、下記に規定のない保護具については、本仕様書内の他の保護具に関する規定に従わなければならない。</p> <p>(2) 保護具の定義及び請負者の責務</p> <p>(a) 保護具は、作業場所での作業員の身体に対し、損傷または機能障害を引き起こす可能性のあるリスクから作業員を防護する個人が使用する用具をいう。→Chapter 1 Annex 1.1 (15) PPE に規定済み。</p> <p>(b) 全ての保護具の構造は、安全が確保された設計であり、かつ作業に適したものでなければならない。→1.32.1、1.32.4 に規定済み。</p> <p>(c) 保護具は、次の(3)に規定の規格に準拠しなければならない。規格に準拠しない保護具の</p>	<p>2.9 PERSONAL PROTECTIVE EQUIPMENT (PPE)</p> <p>2.9.1. General</p> <p>(1) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(2) PPE shall comply with the additional requirements of this Section.</p> <p>(3) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(a) Head Protection;</p> <p>(b) Protective Footwear;</p>	<p>2.9 PERSONAL PROTECTIVE EQUIPMENT (PPE) AND FIRST AID KIT</p> <p>JC: 下記の AED とあわせ PPE から独立した節にしてください。 Please make an independent clause from PPE together with AED provided below.</p> <p>MM: 2.9 PPE: The title of 2.9 will be changed to "PPE and First Aid Kits" and contents will be modified.</p> <p>NK: Tentatively to make 2.9.1 PPE and 2.9.2 First Aid Kit as right.</p> <p>2.9.1. General</p> <p>(1) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(2) PPE shall comply with the additional requirements of this Section.</p> <p>(3) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(a) Head Protection;</p> <p>(b) Protective Footwear;</p>	<p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT</p> <p>2.9.1. Personal Protective Equipment (PPE)</p> <p>(1) General</p> <p>(a) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(b) PPE shall comply with the additional requirements of this Section.</p> <p>(c) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p>

場合、請負者は同等の規格以上であることを証明する資料を、エンジニアへ提出し、同意を得なければならない。→2.9.2以降の各款に規定済み。

- (d) 請負者は、作業員に保護具を無償で提供し、作業現場に携帯させ、必要時には必ず使用させなければならない。→無償で提供規定なし。追記する。
- (e) 請負者は、作業員に保護具を作業開始前に点検させなければならない。→規定なし。追記する。
- (f) 請負者は、保護具の維持管理・衛生に責任を持ち、異常を認めた場合には補修又は取り替えなければならない。→1.32.2に規定済み。

理由：英文案では本節の一般事項として次のように規定している。

2.9.1 PERSONAL PRTECTIVE EQUIPMENT (PPE)

2.9.1 General

Further to the requirements of JSSS 1.32 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment (PPE)] the Contractor shall comply with the additional requirements of this Section.

NK - The following (as deleted) is generally covered by JSSS 1.32 and is therefore deleted to avoid duplication

MD案では上記のように1.32の内容と重複するとして削除しているが、その内容は包括的で具体的にPPEに言及している部分は少ない。→(NKの方針：各PPEを規定していることからMD案通りとする。)

(3) 保護具の目的と規格

保護具の目的と適用する規格は以下である。

(a) 保護帽

保護帽は、物体の飛来落下と衝突、墜落・転倒時における頭部への衝撃の低減又は感電から作業員の頭部の保護を目的とする。

保護帽は、次の規格の要求事項に見合う物を使用しなければならない。→E2.9.2で規定済み

保護帽の適用規格

	規格番号	規格名
1	JIS T8131	産業用ヘルメット/ Industrial safety helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial safety helmets

(c) 安全靴

安全靴は、物体の落下や挟まれによる作業員の足の怪我の低減、鋭利物の踏み抜きの防止、感電防止又は靴の滑りによる転倒を防止

(c) Work Clothing;

- (4) The following additional PPE shall be provided whenever required by the working environment:
 - (a) Eye and Face Protection;
 - (b) Ear Protection
 - (c) Respiratory Protection
 - (d) Safety Belts
 - (e) Gloves
- (5) First-aid Kits and First-Aid Equipment must always be provided.
- (6) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.

2.9.2. Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against from electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

	Standard	Title of Standard
1	JIS T8131	Industrial Safety Helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial Safety Helmets

2.9.3. Protective Footwear

Protective footwear shall protect against foot injury due to crushing by superimposed loads, impact

~~(c) Work Clothing;~~

JC: デフォルトにはしない。This shouldn't be a "default".

MM: 2.9.9 Work Clothing The 2.9.9 will be left after modification to provide work clothing depending upon the type of works.

NK: moved to (4)(c) as right.

- (4) The following additional PPE shall be provided whenever required by the working environment:
 - (a) Eye and Face Protection;
 - (b) Ear Protection
 - (c) Respiratory Protection
 - ~~(d) Safety Belts~~
 - (e) Gloves

NK: Modified as right to cover Safety Belts and harness.

- (5) First-aid Kits and First-Aid Equipment must always be provided.
- (6) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.

2.9.2. Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against from electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

	Standard	Title of Standard
1	JIS T8131	Industrial Safety Helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial Safety Helmets

2.9.3. Protective Footwear

Protective footwear shall protect against foot injury due to crushing by superimposed loads, impact

- (i) Head Protection;
- (ii) Protective Footwear; and
- ~~(iii) Work Clothing~~

- (d) The following additional PPE shall be provided whenever required by the working environment:
 - (i) Eye and Face Protection;
 - (ii) Ear Protection
 - (iii) Respiratory Protection
 - ~~(iv) PPE for PFRS and PFAS (Safety Belts, Full body harnesses, and others)~~
 - (v) Gloves
 - ~~(vi) Work Clothing~~
- (e) First-aid Kits and First-Aid Equipment must always be provided.
- (f) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.

(2) Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against from electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

	Standard	Title of Standard
1	JIS T8131	Industrial Safety Helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial Safety Helmets

(3) Protective Footwear

Protective footwear shall protect against foot injury

することを目的とする。

安全靴は、下の規格の要求事項に見合う物を使用しなければならない。→E2.9.3 で規定済み

安全靴の適用規格

	規格番号	規格名
1	JIS T8101	安全靴/Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20349	Personal protective equipment. Footwear protecting against risks in foundries and welding. Requirements and test methods for protection against risks in welding and allied processes

injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers' from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, electrically conductive or thermally insulating, appropriate footwear shall be selected for the risks identified.

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20349	Personal protective equipment. Footwear protecting against risks in foundries and welding. Requirements and test methods for protection against risks in welding and allied processes

injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers' from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, electrically conductive or thermally insulating, appropriate footwear shall be selected for the risks identified.

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

JC: 防爆性の導電靴・導電靴の話をするのなら、日本だと、JIS T 8103 静電気帯電防止靴がある。だけど、

日本と欧米で電力の接地システムの仕組みが違うため、静電靴の規格が違う。IEC 規格では抵抗の値に下限がないが、日本では下限を生じないと、接地システムの違いから感電の危険が生じる。ので、使えない。が、欧米規格はあるはずだけど、断熱・耐熱は特殊用途なので日本では基準無し

JIS T 8103 specifies explosion-proof conductive shoes or conductive shoes. However, because of difference in power grounding system in Japan and in Europe and America, the standard for static electricity free shoes is also different.

In the IEC standard, there is no lower limit of resistance value. On the other hand, it cannot be used in Japan due to the difference of the grounding system which may induce the danger of electric shock.

There should be European and American standard, however.

There is no standard in Japan for insulation and heat resistance shoes because they are for special purposes.

NK: ASTM F2413 covers the Static electricity. According the Laws of the Country, standards shall be selected for footwear.

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20349	Personal protective equipment. Footwear protecting against risks in foundries and welding. Requirements and test methods for protection against risks in welding and allied processes

JC: 上のコメントのとおり JIS T8103 について確認願います。 Please confirm about JIS T 8103 as stated the comment above.

NK: JIS T 8103 is for Anti electrostatic footwear. It is in Japanese and not ye translated to English. The anti electrostatic is covered by the following ASTM and BS:

ASTM F2413:
4.1.1 Impact resistance
4.1.2 Compression resistance

due to crushing by superimposed loads, impact injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers' from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, electrically insulating or thermally insulating, appropriate footwear shall be selected for the risks identified.

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20346 BS EN ISO 20349	Personal protective equipment - Protective footwear Personal protective equipment. Footwear protecting against risks in foundries and welding

JC: 上のコメントのとおり JIS T8103 について確認願います。

(d) 保護眼鏡及び保護面

保護眼鏡及び保護面は、浮遊粉じん、薬液飛まつ、飛来物、熔融金属、化学ガス・蒸気、有害光線等から作業員の目及び顔の保護を目的とする。

保護眼鏡及び保護面は、下の規格の要求事項に見合う物を使用しなければならない。→E2.9.4で規定済み

保護眼鏡及び保護面の適用規格

	規格番号	規格名
1	JIS T 8141 JIS T 8142	遮光保護具/ Personal eye protectors for optical radiations 溶接用保護面/ Personal face protectors for welding
2	ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
3	BS EN 166 BS EN ISO 4007	Personal eye protection. Specifications Personal protective equipment. Eye and face protection. Vocabulary

(e) 防音保護具

防音保護具は、防音により作業員の聴覚障害を防止する目的とする。

防音保護具は、下の規格の要求事項に見合う物を使用しなければならない。→E2.9.5で規定済み

防音保護具の適用規格

	規格番号	規格名
1	JIS T 8161	防音保護具/ Ear protectors

2.9.4. Eye and Face Protection

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

	Standard	Title of Standard
1	JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
2	ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
3	BS EN 166 BS EN ISO 4007	Personal eye protection. Specifications Personal protective equipment. Eye and face protection. Vocabulary

2.9.5. Ear Protection

Ear protection shall protect workers' hearing against injury from continuous, loud or Intense Noise by providing soundproofing.

The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

- 4.1.3 Metatarsal protection
- 4.1.4 Static electricity buildup, and for ignition of explosives and volatile chemicals,
- 4.1.5 Electric hazard stepping on live electric wires
- 4.1.6 Static dissipative properties for static charge with live electrical circuits, and
- 4.1.7 Puncture resistance

BS EN ISO 20346

- 5.3.2.3 Impact resistance of protective footwear
- 5.3.2.4 Compression resistance of protective footwear
- 6.2.1 Penetration resistance
- 6.2.2.1 Conductive footwear
- 6.2.2.2 Antistatic footwear
- 6.2.2.3 Electrically insulating footwear
- Other requirements

NK: Add BS EN ISO 20346 and change the description to the right.

2.9.4. Eye and Face Protection

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

	Standard	Title of Standard
1	JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
2	ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
3	BS EN 166 BS EN ISO 4007	Personal eye protection. Specifications Personal protective equipment. Eye and face protection. Vocabulary

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The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

(4) Eye and Face Protection

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

	Standard	Title of Standard
1	JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
2	ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
3	BS EN 166 BS EN ISO 4007	Personal eye protection. Specifications Personal protective equipment. Eye and face protection. Vocabulary

(5) Ear Protection

Ear protection shall protect workers' hearing against injury from continuous, loud or Intense Noise by providing soundproofing.

The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
3	BS EN ISO 4869-1 BS EN ISO 4869-2 BS EN ISO 4869-3 BS EN ISO 4869-4	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs

2.1.1 粉じんが発生する場所での必要な措置

有効な粉じんの低減の措置を図ることが難しく、短時間・暫定的な作業の場合に限り、保護具の活用を認める。この場合においては、次表の規格に適合する保護具又は規格に従い選定した保護具を使用させなければならない。

Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

	Standard	Title of Standard
1	JIS T 8161	Ear protectors
2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
3	BS EN ISO 4869-1 BS EN ISO 4869-2 BS EN ISO 4869-3 BS EN ISO 4869-4	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration earmuffs

2.9.6. Respiratory Protection

Respiratory protection shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

Respiratory protection shall fit properly and be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.

Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.

Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

	Standard	Title of Standard
1	JIS T 8161	Ear protectors
2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
3	BS EN ISO 4869-1 BS EN ISO 4869-2 BS EN ISO 4869-3 BS EN ISO 4869-4	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs

2.9.6. Respiratory Protection

Respiratory protection shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

Respiratory protection shall fit properly and be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.

JC: for user ?

NK: referring to Respiratory Protection Handbook:
https://books.google.co.jp/books?id=hxCtLEjWOKMC&pg=PA91&lpg=PA91&dq=Respiratory+protection+shall+fit+properly&source=bl&ots=h25b4T2SA&sig=ACfu3U1pB810_wnsSRBR_Zk2Qd3NXp3Lg&hl=ja&sa=X&ved=2ahUKFwin26qb7fjnAhUjvslsBHRMbdDcQ6AEwDnoEC_AoQAQ#v=onepage&q=Respiratory%20protection%20shall%20fit%20properly&f=false
 Added "equipment (RPE) and "to worker's face" as right.

Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.

JC: 重要。このほかの項目でも何か留意事項ないか？ Important. Are there any matters to be considered other than this?

NK: The specification above is made referring to the following HSE:
 1) Personal protective equipment (PPE) at work, A brief guide, <https://www.hse.gov.uk/pubns/indg174.pdf>
 2) Respiratory protective equipment at work, practical guide, HSG53 (Fourth edition, published 2013). <https://www.hse.gov.uk/pubns/priced/hsg53.pdf>
 Addition for maintenance and reference is added as right.

Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

	Standard	Title of Standard
1	JIS T 8161	Ear protectors
2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
3	BS EN ISO 4869-1 BS EN ISO 4869-2 BS EN ISO 4869-3 BS EN ISO 4869-4	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs

(6) Respiratory Protection

Respiratory protection shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

Respiratory protection equipment (RPE) shall fit properly to worker's face and be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.

When replacing them or any other part, check with the manufacturer's guidance and ensure the correct replacement part is used.

Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.

Maintenance is a requirement for all RPE, except for disposable (single use) RPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month. However, if the RPE is used only occasionally, an examination and test should be carried out before use and, in any event, the interval should not exceed three months. Emergency escape-type RPE should be examined and tested in accordance with the manufacturer's instructions.

	規格番号	規格名
1	JIS T 8151 JIS T 8157	防じんマスク/Particulate respirator 電動ファン付き呼吸用保護具/ Powered air purifying respirator
2	1) BS EN 149: 2001+A1: 2009 2) BS EN 14593-1: 2018	1) Respiratory protective devices. Filtering half masks to protect against particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

(f) 墜落制止用器具

墜落制止用器具は、高所又は急斜面における作業員の墜落及び滑落による被災を防止することを目的とする。

墜落制止用器具は、下の規格の要求事項に見合う物を使用しなければならない。→E2.9.7 で規定済み

Table 2.9.5: Table of PPE for Respiratory Protection

	Standard	Title of Standard
1	JIS T 8151 JIS T 8157	Particulate respirator Powered air purifying respirator
2	BS EN 149: 2001+A1: 2009 2) BS EN 14593-1: 2018	1) Respiratory protective devices. Filtering half masks to protect against particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

2.9.7. Safety Belts

Safety belts shall prevent the risk of workers falling from a height or sliding down slopes.

For further requirement on PPE for fall prevention, refer to **ISSS 2.5.13 [PPE for Fall Prevention]**.

Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: Table of PPE for Respiratory Protection

	Standard	Title of Standard
1	JIS T 8151 JIS T 8157	Particulate respirator Powered air purifying respirator
2	BS EN 149: 2001+A1: 2009 2) BS EN 14593-1: 2018	1) Respiratory protective devices. Filtering half masks to protect against particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

2.9.7. Safety Harnesses and Belts

IC: PFAS に限定せず、PFRS を採用するにしても、belt 前提のタイトルはまずい(Safety Harnesses and Belts) いまさらだけど、BS は細かく分かれていて、これは本当にハーネスだけなのでベルトは入っていないはず、かつ、他のコネクタとかはまた別

BS EN 354 PPE - Lanyards

BS EN 358 PPE - Work positioning systems

BS EN 362 PPE - Connectors *みたいな感じ*

ご参考

<https://www.safety-height.co.uk/products-services/performance-standards/>

ベルトは保持装置にあるんじゃないかと

Even if using PFRS without limiting to PFAS, the title assuming use of belt is not appropriate. (Safety Harnesses and Belts.)

BS is specifying these in various items. This should be about harnesses only not including belts and other connectors are separately specified.

BS EN 354 PPE - Lanyards

BS EN 358 PPE - Work positioning systems

BS EN 362 PPE - Connectors

Belt may be specified in holding devises.

NK: Modified as right.

Safety belts shall prevent the risk of workers falling from a height or sliding down slopes.

For further requirement on PPE for fall prevention, refer to **ISSS 2.5.13 [PPE for Fall Prevention]**.

Safety belts shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for Safety Belts

In addition to the requirements above, the Contractor shall select, use and maintain RPE referring to Respiratory protective equipment at work, practical guide, HSG53 (Fourth edition, published 2013).

Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: Table of PPE for Respiratory Protection

	Standard	Title of Standard
1	JIS T 8151 JIS T 8157	Particulate respirator Powered air purifying respirator
2	BS EN 149: 2001+A1: 2009 BS EN 14593-1: 2018	Respiratory protective devices. Filtering half masks to protect against particles. Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

(7) Safety Harnesses and Belts

Safety-belts PPE for PFRS shall prevent the risk of workers falling from a height or sliding down slopes. PPE for PFAS shall arrest a worker in a fall from a height or sliding down slopes.

墜落制止用器具の適用規格		
	規格番号	規格名
1	JIS T8165	墜落制止用器具/ Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN 361	Personal protective equipment against falls from a height. Full body harnesses

(g) 手袋

手袋は、作業員の感電防止、溶接及び溶断作業における火花、溶融金属、熱せられた金属などから手を保護すること及び工具、機械から手袋を通して手に伝わる振動を軽減することを目的とする。

手袋は、下の規格の要求事項に見合う物を使用しなければならない。→E2.9.8で規定済み

手袋の適用規格

	規格番号	規格名
1	JIS T 8112 JIS T 8113 JIS T 8114	電気絶縁用手袋/ Gloves of insulating material used for electrical working 溶接用かわ製保護手袋/ Protective Leather Gloves for Welders 防振手袋/ Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (a nationally adopted international standard)
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

- (参考) 英文案では、他に次を追加規定している。
 2.9.6 Respiratory Protection
 2.9.9 Working Clothing
 2.9.10 First Aid Kits

Safety belts shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for Safety Belts

	Standard	Title of Standard
1	JIS T8165	Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN 361	Personal protective equipment against falls from a height. Full body harnesses

2.9.8. Gloves

Gloves shall protect workers' hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers' hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8112 JIS T 8113 JIS T 8114	Gloves of insulating material used for electrical working Protective Leather Gloves for Welders Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (a nationally adopted international standard)
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

	Standard	Title of Standard
1	JIS T8165	Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN 361	Personal protective equipment against falls from a height. Full body harnesses

JC: これはハーネスの規定なので restraint の記載がないのは、安全ベルトが BS のどこに規定されているのか確認のうえ、追記願います。BS EN 358 あたりを確認ください。

This is a standard for harnesses; thus, it probably does not stipulate about "restraint". Please add safety belts after confirming which part of BS stipulates safety belt. It is advisable to check BS EN 358.

NK: The following is added as commented.

BS EN 358:2018 Personal protective equipment for work positioning and prevention of falls from a height. Belts and lanyards for work positioning or restraint

2.9.8. Gloves

Gloves shall protect workers' hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers' hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8112 JIS T 8113 JIS T 8114	Gloves of insulating material used for electrical working Protective Leather Gloves for Welders Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (a nationally adopted international standard)
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

2.9.9. Work Clothing

~~All personnel shall be supplied with and shall wear suitable protective work clothing appropriate for their work tasks. In general, all personnel shall be provided with overalls.~~

~~Further risks such as from chemical or metal splash, spray from pressure leaks or spray guns,~~

For further requirement on PPE for fall prevention, PFRS and PFAS refer to JSSS 2.5.13 (Personal Protective Equipment for Fall Prevention). PPE for PFRS and PFAS Safety belts shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for Safety Belts PPE for PFRS and PFAS

	Standard	Title of Standard
1	JIS T8165	Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN 361 BS EN 358	Personal protective equipment against falls from a height. Full body harnesses Personal protective equipment for work positioning and prevention of falls from a height. Belts and lanyards for work positioning or restraint

(8) Gloves

Gloves shall protect workers' hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers' hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8112 JIS T 8113 JIS T 8114	Gloves of insulating material used for electrical working (Japanese only) Protective Leather Gloves for Welders Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (a nationally adopted international standard) (too long)
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

	<p>2.9.9. Work Clothing</p> <p>All personnel shall be supplied with and shall wear suitable protective work clothing appropriate for their work tasks. In general, all personnel shall be provided with overalls.</p> <p>Further risks such as from chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, entanglement of own clothing, heat, cold etc. shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame-retardant, anti-static, chain mail, chemically impermeable, and high-visibility clothing and the like.</p> <p>Work clothing shall be selected and provided for the risks to be identified.</p> <p>Work clothing shall be kept reasonably clean and shall be replaced when worn out or damaged.</p> <p>2.9.10. First-aid Kits</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid” of “Part 1910 - Occupational Safety and Health Standards” and as follows.</p> <p>The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.</p> <p>All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the First aid Kit(s).</p> <p>Each first-aid kit should contain at least the following:</p> <ol style="list-style-type: none"> (1) an up-to-date first-aid manual (2) a list of emergency phone numbers (3) waterless hand cleaner (4) sterile gauze pads of different sizes (5) adhesive tape (6) adhesive bandages in several sizes 	<p>contaminated dust, impact or penetration, entanglement of own clothing, heat, cold etc. shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame retardant, anti-static, chain mail, chemically impermeable, and high visibility clothing and the like.</p> <p>Work clothing shall be selected and provided for the risks to be identified.</p> <p>Work clothing shall be kept reasonably clean and shall be replaced when worn out or damaged.</p> <p>JC: デフォルトにしない前提にたち、削除。 The premise is that this is not a default. Delete.</p> <p>MM: 2.9.9 Work Clothing: The 2.9.9 will be left after modification to provide work clothing depending upon the type of works.</p> <p>NK: Modified and left as right.</p> <p>2.9.10. First-aid Kits</p> <p>JC: 下記の AED とあわせ PPE から独立した節にしてください。 Please make an independent clause from PPE together with AED provided below.</p> <p>MM: 2.9 PPE: The title of 2.9 will be changed to “PPE and First Aid Kits” and contents will be modified.</p> <p>NK: Tentatively to make 2.9.1 PPE and 2.9.2 First Aid Kit as right.</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid” of “Part 1910 - Occupational Safety and Health Standards” and as follows.</p> <p>JC: https://up.codes/viewer/osha-1910-general-industry/chapter/K/medical-and-first-aid#K</p> <p>The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.</p> <p>All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the First aid Kit(s).</p> <p>Each first-aid kit <u>should contain at least the following:</u></p> <p>JC: 意図的な should なのか、要確認。 It this “should” used with any intention? Please confirm.</p> <p>NK: Items list of First Aid Kits are not mandatory as APPENDIX A TO §1926.50—FIRST AID KITS (NON-</p>	<p>(9) Work Clothing</p> <p>Contractor’s Personnel All personnel shall be supplied with and shall wear suitable protective work clothing required by the working environment appropriate for their work tasks. In general, all personnel shall be provided with overalls.</p> <p>Further risks such as from chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, entanglement of own clothing, heat, cold, etc. shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame-retardant, anti-static, chain mail, chemically impermeable, and high-visibility clothing and the like.</p> <p>Work clothing shall be selected and provided for the risks to be identified.</p> <p>Work clothing shall be kept reasonably clean and shall be replaced when worn out or damaged.</p> <p>2.9.2. First-aid Kits</p> <p>(1) General</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid” of “Part 1910 - Occupational Safety and Health Standards” and as follows.</p> <p>The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.</p> <p>All persons working at the site need to be aware of their purpose and location. Adequate signage shall</p>
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	<p>(7) elastic and cotton bandages (8) a splint (9) antiseptic wipes (10) antibiotic ointment (11) antiseptic solution (such as hydrogen peroxide) (12) hydrocortisone cream (1%) (13) acetaminophen and ibuprofen (14) tweezers (15) sharp scissors (16) safety pins (17) alcohol wipes or ethyl alcohol (18) thermometer (19) flashlight and extra batteries (20) a blanket</p> <p>To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, CPR breathing barriers, eye protection and like supplies.</p>	<p>MANDATORY), therefore not “shall” but “should”.</p> <p>JC: 個数の前安とか OSHA にある? この例示はどこから? Where did the numbers of first-aid kits come from, OSHA?</p> <p>NK: The following seems to be listed form HSE (not yet confirmed.)</p> <ol style="list-style-type: none"> (1) an up-to-date first-aid manual (2) a list of emergency phone numbers (3) waterless hand cleaner (4) sterile gauze pads of different sizes (5) adhesive tape (6) adhesive bandages in several sizes (7) elastic and cotton bandages (8) a splint (9) antiseptic wipes (10) antibiotic ointment (11) antiseptic solution (such as hydrogen peroxide) (12) hydrocortisone cream (1%) <p>JC: Anti-itch ointment</p> <ol style="list-style-type: none"> (13) acetaminophen and ibuprofen (14) tweezers (15) sharp scissors (16) safety pins (17) alcohol wipes or ethyl alcohol (18) thermometer (19) flashlight and extra batteries (20) a blanket <p>NK: The items marked yellow color are same in ANSI Z308.1-2015, but the following items are not listed above.</p> <p>Breathing Barrier Burn Dressing (gel soaked) Burn Treatment Cold Pack Eye Covering, with means of attachment Eye/Skin Wash Tourniquet Trauma pad Triangular Bandage</p> <p>NK: For easily find items of First Aid Kit, items in ANSI Z308.1-2015 is listed as right.</p> <p>To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, CPR breathing barriers, eye protection and like supplies.</p> <p>JR: 略号は出てない? ANZI には標準で入っている cardiopulmonary resuscitation 心肺蘇生法 口をつけないで人口呼吸を行うためのマスク No abbreviation? In ANZI, abbreviations are commonly shown. CRP: CardioPulmonary Resuscitation</p> <p>NK: Added as right.</p> <p>2.9.11. First-Aid Equipment - AED</p>	<p>be provided at the Site to show the location of the first aid kit(s).</p> <p>(2) First-Aid Kit</p> <p>Each following first-aid kit should contain at least the following items, specifications and quantities listed in ANSI Z308.1-2015 according to the work:</p> <ol style="list-style-type: none"> (a) Adhesive Bandage (b) Adhesive Tape (c) Antibiotic Application (d) Antiseptic (e) Breathing Barrier (f) Burn Dressing (gel soaked) (g) Burn Treatment (h) Cold Pack (i) Eye Covering, with means of attachment (j) Eye/Skin Wash (k) First Aid Guide (l) Hand Sanitizer (m) Medical Exam Gloves (n) Roller Bandage (o) Scissors (p) Splint (q) Sterile pad (r) Tourniquet (s) Trauma pad (t) Triangular Bandage <p>To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, Cardiopulmonary Resuscitation (CPR) breathing barriers, eye protection and like supplies.</p>
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2.9.11. First-Aid Equipment - AED

Unless otherwise stated in the bidding Documents and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.

The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.

All personnel at the site need to be aware of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.

Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.

AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	IEC STANDARD 60601-2-4	Medical electrical equipment, Part 2-4: Particular requirements for the safety of cardiac defibrillators

Unless otherwise stated in the ~~bidding Documents~~ and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.

The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.

All personnel at the site need to be aware of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.

Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.

AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	IEC STANDARD 60601-2-4	Medical electrical equipment, Part 2-4: Particular requirements for the safety of cardiac defibrillators

JC: BS EN に修正すべき This should be changed to BS EN.
NK: Revised from IEC to BS as right.

IEC 60601-2-4:2010/AMD1:2018 Medical electrical equipment - Part 2-2: Particular requirements for the basic safety and essential performance of cardiac defibrillators

< 仮訳 > 医用電気機器—第2—4 部: 細動除去機の基礎安全及び基本性能に関する個別要求事項

2010 に対応した BS があるはず→これ、BS EN 60601-2-4:2011+A1:2019

参考用なら IEC 旧 2002 版は閲覧可能
<https://www.sis.se/api/document/preview/559961/>
IEC60601 医療機器に対応した JIS T0601 シリーズがあるが、除細動器は JIS T1355、2006/11/27 廃で、その後の JIS 対応規格がない(?)
<https://ja.wikipedia.org/wiki/%E6%97%A5%E6%9C%AC%E7%94%A3%E6%A5%AD%E8%A6%8F%E6%A0%BC%EF%BC%88%E5%8C%BB%E7%99%82%E5%AE%89%E5%85%A8%E7%94%A8%E5%85%B7%EF%BC%89%E3%81%AE%E4%B8%80%E8%A6%A7>

JC: ANSI/AAMI/IEC 60601-2-4:2010/A1:2018 もある

<https://webstore.ansi.org/Standards/AAMI/ANSIAAMIIEC606012010A12018>

[ANSI/ISEA Z308.1-2015](https://www.ansi.org/standards/ansi-isea-z308.1-2015)

(3) Automated External Defibrillator (AED)

Unless otherwise stated in ~~the bidding Documents Contract~~ and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.

The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.

All personnel at the site need to be aware of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.

Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.

AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	BS EN 60601-2-4:2011+A1:2019	Medical electrical equipment. Particular requirements for the basic safety and essential performance of cardiac defibrillators

SUPPLY	MINIMUM QUANTITY		MINIMUM SIZE/VOLUME	
	Class A	Class B	United States	Metric
Adhesive bandages	16	50	1 x 3 in.	2.5 x 7.5 cm
Adhesive tape	1	2	2.5 yd. (total)	2.3 m
Antibiotic application	10	25	1/57 oz.	0.5 g
Antiseptic	10	50	1/57 oz.	0.5 g
Breathing barrier	1	1	N/A	N/A
Burn dressing (gel soaked)	1	2	4 x 4 in.	10 x 10 cm
Burn treatment	10	25	1/22 oz.	0.9 g
Cold pack	1	2	4 x 5 in.	10 x 12.5 cm
Eye covering (w/means of attachment)	2	2	2.9 sq. in.	19 sq. cm
Eye/skin wash	1 fl. oz. total			29.6 ml
		4 fl. oz. total		118.3 ml
First aid guide	1	1	N/A	N/A
Hand sanitizer	6	10	1/32 oz.	0.9 g
Medical exam gloves	2 pair	4 pair	N/A	N/A
Roller bandage (2-inch)	1	2	2 in. x 4 yd.	5 cm x 3.66 m
Roller bandage (4-inch)	0	1	4 in. x 4 yd.	10 cm x 3.66 m
Scissors	1	1	N/A	N/A
Spine	0	1	4 x 24 in.	10.2 x 41 cm
Sterile pads	2	4	3 x 3 in.	7.5 x 7.5 cm
Tourniquet	0	1	1 in. (width)	2.5 cm (width)
Trauma pads	2	4	5 x 9 in.	12.7 x 22.9 cm
Triangular bandage	1	2	40 x 40 x 56 in.	101 x 101 x 142 cm

上記 OSHA の引用は正確にはこれの前々版の 1998 版

ANSI Z308.1-1998 – Minimum Requirements for Workplace First Aid Kits	
Basic kit – minimum contents	
Item	Minimum quantity
Absorbent compress, 32 sq. in. (81.3 sq. cm.) with no side smaller than 4 in. (10 cm.)	1
Adhesive bandages, 1 in. x 3 in. (2.5 cm. x 7.5 cm.)	16
Adhesive tape, 5 yd. (457.2 cm.) total	1
Antiseptic, 0.5g (0.14 fl. oz.) applications	10
Burn treatment, 0.5g (0.14 fl. oz.) applications	6
Medical exam gloves	2 pair
Sterile pads, 3 in. x 3 in. (7.5 x 7.5 cm.)	4
Triangular bandage, 40 in. x 40 in. x 56 in. (101 cm. x 101 cm. x 142 cm.)	1

Optional contents	
Optional items and sizes should be added to the basic contents listed above to augment a first aid kit, based on the specific hazards existing in a particular work environment. Optional items addressed in ANSI Z308.1-1998 (listed below) must meet the minimum requirements of Section 5.3 of that standard. Items not addressed by the ANSI standard must comply with standards or regulations, where applicable, established by the U.S. Food and Drug Administration (FDA), the current edition of the U.S. Pharmacopoeia/National Formulary (USP/NF) or other standards-writing body.	
Bandage compress – 2 in. x 2 in.	4
3 in. x 3 in.	2
4 in. x 4 in.	1
Eye covering with means of attachment	1
Eye wash – 1 fl. oz. (30 ml)	1
Cold pack – 4 in. x 5 in.	1
Roller bandage – 2 in. (5 cm)	2
4 in. (10 cm)	1

Note: A CPR barrier is also recommended, but not required.

**JICA Standard Safety Specification Preparation Study
2 General Requirements (English R3 for Issue 3) 2.1-2.9**

2019.9.3 Japanese Final
2019.11.19 NK Issue 2
2019.12.17 JICA Comments
2020.3.4NK R2
2020.3.16 JICA Comments
2020.3.12 NK R3
2020.3.14 NKR3-r1

JSSS in English R2 for Issue 3 (2020/3/4)	JICA Comments on R2(2020/3/6) JC: JICA Comments in blue letters on sentence underlined NK: NK actions	JSSS in English R3 for Issue 3 (2020/3/14r1)
<p>2 GENERAL SAFETY MEASURES</p> <p>2.1 WORK ENVIRONMENT</p> <p>2.1.1 Hazardous Substances</p> <p>2.1.2 Poor Ventilation</p> <p>2.1.3 Noise</p> <p>2.1.4 Further Requirements for Dangerous Work</p> <p>2.1.5 High and Low Temperatures and Humidity</p> <p>2.1.6 Monitoring and Records</p> <p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1 General</p> <p>2.2.1. Secure Site Perimeter</p> <p>2.2.3. Measures for Road Occupation</p> <p>2.2.4. Temporary Road Signs</p> <p>2.2.5. Traffic Accident Prevention at Site Entrance</p> <p>2.2.6. Community Relations</p> <p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1. General</p> <p>2.3.2. Demarcation and Requirements</p> <p>2.3.3. Example of Dangerous Work</p> <p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>2.4.2. Duties</p> <p>2.4.3. Placement</p> <p>2.4.4. Safety</p> <p>2.4.5. Signals</p> <p>2.4.6. Qualification of Personnel</p> <p>2.4.7. Communication tools</p> <p>2.4.8. PPE</p> <p>2.5 FALL PREVENTION</p> <p>2.5.1. General</p> <p>2.5.2. Height Thresholds</p> <p>2.5.3. Facilities for Ascending and Descending</p> <p>2.5.4. Risk Assessments</p> <p>2.5.5 Handrails</p> <p>2.5.6. Toeboards</p> <p>2.5.7. Temporary Walkways and Passageways</p> <p>2.5.8. Preventing Falls by Providing Temporary Working Platforms</p> <p>2.5.9. Preventing Falls from the Ends and Openings of Working Platforms</p> <p>2.5.10. Measures for Preventing Falls during Excavation Work</p> <p>2.5.11. Measures for Preventing Falls during Rope Access Work</p> <p>2.5.12. Further Measures for Contractor’s Personnel</p> <p>2.5.13. Personal Protective Equipment for Fall Prevention</p> <p>2.5.13. Portable Ladders and Stepladders</p> <p>2.5.14. Work on Roofs and Other Areas</p> <p>2.5.15. Safety Nets</p> <p>2.6 FALLING OBJECTS</p> <p>2.6.1. General</p> <p>2.6.2. General Preventive Measures</p> <p>2.6.3. Preventive Measures against Dust and Windblown Debris</p>	<p>2 GENERAL SAFETY MEASURES</p> <p>2.1 WORK ENVIRONMENT</p> <p>2.1.1 Hazardous Substances</p> <p>2.1.2 Poor Ventilation</p> <p>2.1.3 Noise</p> <p>2.1.4 Further Requirements for Dangerous Work</p> <p>2.1.5 High and Low Temperatures and Humidity</p> <p>2.1.6 Monitoring and Records</p> <p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1 General</p> <p>2.2.1. Secure Site Perimeter</p> <p>2.2.3. Measures for Road Occupation</p> <p>2.2.4. Temporary Road Signs</p> <p>2.2.5. Traffic Accident Prevention at Site Entrance</p> <p>2.2.6. Community Relations</p> <p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1. General</p> <p>2.3.2. Demarcation and Requirements</p> <p>2.3.3. Example of Dangerous Work</p> <p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>2.4.2. Duties</p> <p>2.4.3. Placement</p> <p>2.4.4. Safety</p> <p>2.4.5. Signals</p> <p>2.4.6. Qualification of Personnel</p> <p>2.4.7. 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<p>2.6.4. Preventive Measures against Dropping Objects 2.6.5. Prevention of Accumulation of Goods at High Levels Height</p> <p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1. General 2.7.2. Preventive Measures 2.7.3. Measures for Heavy Rain 2.7.4. Measures for Strong Wind and Storms 2.7.5. Measures for Heavy Snow and Ice 2.7.6. Measures for Lightning 2.7.7. Measures for Earthquake and Tsunami 2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>2.8 FIRE PREVENTION</p> <p>2.8.1. General 2.8.2. Temporary Facilities - Firefighting System 2.8.3. Measures of Fire Prevention and Firefighting 2.8.4. Measures for Evacuation 2.8.5. Management of Flammable and Combustible Materials 2.8.6. Additional Service Requirement 2.8.7. Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT</p> <p>2.9.1. Personal Protective Equipment 2.9.2. First-aid Kits</p>	<p>2.6.4. Preventive Measures against Dropping Objects 2.6.5. Prevention of Accumulation of Goods at High Levels Height</p> <p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1. General 2.7.2. Preventive Measures 2.7.3. Measures for Heavy Rain 2.7.4. Measures for Strong Wind and Storms 2.7.5. Measures for Heavy Snow and Ice 2.7.6. Measures for Lightning 2.7.7. Measures for Earthquake and Tsunami 2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>2.8 FIRE PREVENTION</p> <p>2.8.1. General 2.8.2. Temporary Facilities - Firefighting System 2.8.3. Measures of Fire Prevention and Firefighting 2.8.4. Measures for Evacuation 2.8.5. Management of Flammable and Combustible Materials 2.8.6. Additional Service Requirement 2.8.7. Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT</p> <p>2.9.1. Personal Protective Equipment 2.9.2. First-aid Kits</p>	<p>2.6.4. Preventive Measures against Dropping Objects 2.6.5. Prevention of Accumulation of Goods at High Levels Height</p> <p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1. General 2.7.2. Preventive Measures 2.7.3. Measures for Heavy Rain 2.7.4. Measures for Strong Wind and Storms 2.7.5. Measures for Heavy Snow and Ice 2.7.6. Measures for Lightning 2.7.7. Measures for Earthquake and Tsunami 2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>2.8 FIRE PREVENTION</p> <p>2.8.1. General 2.8.2. Temporary Facilities - Firefighting System 2.8.3. Measures of Fire Prevention and Firefighting 2.8.4. Measures for Evacuation 2.8.5. Management of Flammable and Combustible Materials 2.8.6. Additional Service Requirement 2.8.7. Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT</p> <p>2.9.1. Personal Protective Equipment 2.9.2. First-aid Kits</p>
	<p>JC: e-mail from Mr. Ito on 2020/3/10</p> <p>1. 標記の件、下記の通りコメントします。特に PFAS や PFRS の理解に混乱が見られるように思えます。</p> <p>We hereunder comment regarding Chapter 2 as follows. Specially there seems confusion between PFAS and PFAS.</p> <p>2. なお、全体が提出された際に、今回コメントしていない部分にコメントする可能性があることは、先ほどお送りしたメールにある通りです。</p> <p>As we mentioned in the last e-mail, please keep in mind that there is a possibility to make our comments to items which are not commented this time.</p> <p>3. 2.1.1 (2) :こちらのコメントの仕方も悪かったですが、記載通りだと HSE に掲載されている全てのガス・粉じん等に対する規制を遵守しなければならない、という意味にも取られかねないので修正しています。</p> <p>2.2.1 (2): Though it seems our comments may be not properly expressed, the last description in NK draft R2 may be understood as the Contractor shall comply with values of all dusts, gases, etc. in the table of HSE. It is not JICA’s intention, therefore revision is made as shown here.</p> <p>4. 2.2.2:Secure Working Area Perimeter とこちらからお願いしたものが Secure Site Perimeter となっておりますが、Working Area に戻しています。御社の説明に「Secure Working Area Perimeter is specified in JSSS 2.3」という記述がありますが、2.3 には Dangerous Work に関連することに限定した記述となっており、一般的な記述ではありません。</p> <p>2.2.2: JC requested to change to 2.2.2:Secure Working Area Perimeter but NK draft is still Secure Site Perimeter therefore JC changed again to Working Area. NK explanation is that Secure Working Area Perimeter is specified in JSSS 2.3. The 2.3 specifies regarding only Dangerous Work but not general requirements.</p> <p>5. 2.2.3(1) (e)(f):削除しています。理由は既に前回付してある JICA コメント通りです。(d)の記述は夜間等の non-working hours にも適用されるはずです。</p> <p>2.2.3(1) (e)(f): JC deleted. The reason is as commented. The requirements of (d) apply to the non-working hours including night time.</p> <p>6. 2.5.1(2): 御社の説明の意図に沿った内容にするならば、for use of personnel who engage in.....とした方が良いと思われ、そのように修正しています。但し、</p>	

	<p>この条項が本当にこの場所に置いておくことがふさわしいか否かは再検討願います。</p> <p>2.5.1(2): JC considers it is better to revise it to “for use of personnel who engage in...” to specify the same content as the intention in NK’s explanation. Please reconsider where is proper location to specify this clause.</p> <p>7. 2.5.11(1)(a)にある Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; という部分は修正が必要だと考えます。親綱に結び付けるのは PFRS ではなく、身体保持器具なのではないでしょうか？添付の図を参照してください。</p> <p>2.5.11(1)(a): JC considers that it needs to correct “Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached”. The good to connect to working lines is not the PFRS but positioning device. Please refer to the attached figure.</p> <p>8. 2.5.11(2)(e): 記述がおかしいように思えます(「ハーネスをハーネスにつける?」)。修正を検討して下さい。ロープ高所作業におけるハーネス(添付の図は古いので胴ベルトですが)は親綱につけるのではないのでしょうか？</p> <p>2.5.13(1)(b)にある PPE for という言葉は不要です。むしろここでは PPP(E)としての PFRS を論じています。</p> <p>2.5.11(2)(e): The description is strange “harness is attached to harness”. Please consider correcting it. In rope work, harness should be connected with working lines. “PPE for” is not necessary in 2.5.13(1)(b). Here, PFRS is discussed as PPE.</p> <p>9. 2.5.13(1)(a) に opening という言葉を加えています(2.5.9(1)の記述(端、開口部からの墜落防止の措置を取らなければならない、とするもの)の趣旨に合致すると思います。</p> <p>2.5.13(1)(a): “opening” is added to meet the requirement that fall prevention measures shall be taken at the edge and opening specified in 2.5.9(1).</p> <p>10. 2.6.4(2): in addition よりも In such a case の方がふさわしいと思われ、その旨修正しています。</p> <p>2.6.4(2): It is revised because JC considers “In such a case” is more suitable than “in addition”.</p> <p>11. 2.7.1(2): 悪天候に関する記述ですが、「foreseeable で EOT 等につながるものではない」と言い切ることは不適当です。修正しています。</p> <p>2.7.1(2): It is inappropriate to affirm “they shall not be construed as constituting a cause of delay giving any entitlement to extension of time under GC”. Revision is made.</p> <p>12. 2.9.1(6): 付け加えられた「Maintenance is a requirement for all RPE, except for disposable (single use) RPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month. However, if the RPE is used only occasionally, an examination and test should be carried out before use and, in any event, the interval should not exceed three months. Emergency escape-type RPE should be examined and tested in accordance with the manufacturer’s instructions.」という文章は PPE の全体にかかるものではないでしょうか。2.9.1(1)に移すべきではないでしょうか</p> <p>2.9.1(6): The added phrase “Maintenance is a requirement for all RPE, except for disposable (single use) RPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month. However, if the RPE is used only occasionally, an examination and test should be carried out before use and, in any event, the interval should not exceed three months. Emergency escape-type RPE should be examined and tested in accordance with the manufacturer’s instructions.” seems to cover whole PPE. Therefore, they should be moved to 2.9.1(1).</p>	
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	<p>13. 2.6.1(1)(d)及び2.9.2(9):PPE から作業服に関する記述を削除しています。いろいろと議論はあったところですが、やはり「コントラクターが支給する」ということをデフォルトにするのはやりすぎのように思います。</p> <p>2.6.1(1)(d) and 2.9.2(9): The requirements regarding working clothes are deleted. Though there is various discussion, it is excessive to specify as default for the Contractor to provide workers working clothes.</p> <p>14. またこれは総則の定義にもさかのぼる全般の話なのですが、デフォルトで使用することを想定している harness が普通名詞で、一般には使用が制限される方向にある胴ベルトが Safety Belt として大文字の定義語になっているのが少し気になります。但し、これは全体を整理する中で再検討すればよいと思います。</p> <p>The term of harness which is specified to be used for PPE as default is not defined as “Harness”, on the other hand that of “safety belt” which is specified as limited use is defined as “Safety Belt” in Chapter 1. These terms seem a little strange. Definitions of terms will be discussed when reviewing whole contents of JSSS.</p>	
<p>2 GENERAL SAFETY MEASURES</p> <p>2.1 WORK ENVIRONMENT</p> <p>Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances</p> <p>(1) Definitions</p> <p>Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [Definitions and Abbreviations]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than:</p> <p>(a) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p> <p>(b) 4 mg/m3 (8-hour TWA) of respirable dust.</p> <p><i>(TWA means Time weighted average.)</i></p> <p>Some dusts have been assigned specific WELs as referred to in Table 2.1.1 below.</p> <p>(2) Standards of Workplace Exposure Limits (WELs)</p> <p>The Contractor shall comply with EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1. The Contractor shall monitor the dusts specified in the Particular Safety Specifications.</p>	<p>2 GENERAL SAFETY MEASURES</p> <p>2.1 WORK ENVIRONMENT</p> <p>Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances</p> <p>(1) Definitions</p> <p>Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [Definitions and Abbreviations]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than:</p> <p>(a) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p> <p>(b) 4 mg/m3 (8-hour TWA) of respirable dust.</p> <p><i>(TWA means Time weighted average.)</i></p> <p>Some dusts have been assigned specific WELs as referred to in Table 2.1.1 below.</p> <p>(2) Standards of Workplace Exposure Limits (WELs)</p> <p>The Contractor shall comply with EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1. The Contractor shall monitor the dusts specified in the Particular Safety Specifications and take necessary measures so that the short term and long-term exposure limits will not be exceeded.</p> <p>JC: ここで、ガイダンスとして HSE の表を参照するようにしてください。 Please describe in the User Guide that the Employer shall specify the dusts to be monitored and their short term and long-term WELs selected from the EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1.</p> <p>NK: modified as right and describe above in the User Guide..</p>	<p>2 GENERAL SAFETY MEASURES</p> <p>2.1 WORK ENVIRONMENT</p> <p>Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances</p> <p>(1) Definitions</p> <p>Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [Definitions and Abbreviations]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than:</p> <p>(c) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p> <p>(d) 4 mg/m3 (8-hour TWA) of respirable dust.</p> <p><i>(TWA means Time weighted average.)</i></p> <p>(2) Standards of Workplace Exposure Limits (WELs)</p> <p>The Contractor shall monitor the dusts specified in the Particular Safety Specifications and take necessary measures so that the short term and long-term exposure limits will not be exceeded.</p>

<p>(3) Asbestos</p> <p>(c) When required in the Contract, the Contractor shall take measures for asbestos in accordance with the Particular Safety Specification.</p> <p>(d) When existence of asbestos is found in the Works, the Contractor shall report to the Engineer and take measures in accordance with the requirements of JSSS 1.19 [Hazardous Substances], and</p> <p>(e) If so required in the Contract or by an instruction by the Engineer, the Contractor shall comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.</p> <p>(4) Other Hazardous Substances</p> <p>The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either existing on the Site or used in the Works.</p> <p>(5) Prevention</p> <p>(f) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and</p> <p>(g) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowsers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE</p> <p>(h) If it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and</p> <p>(i) For details of PPE refer to JSSS 2.9.1 [Personal Protective Equipment (PPE)].</p> <p>2.1.2 Poor Ventilation</p> <p>(1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation.</p> <p>(2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels.</p> <p>(3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9.1 [Personal Protective Equipment (PPE)].</p> <p>(4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and provide additional adequate ventilation.</p>	<p>(3) Asbestos</p> <p>(a) When required in the Contract, the Contractor shall take measures for asbestos in accordance with the Particular Safety Specification.</p> <p>(b) When existence of asbestos is found in the Works, the Contractor shall report to the Engineer and take measures in accordance with the requirements of JSSS 1.19 [Hazardous Substances], and</p> <p>(c) If so required in the Contract or by an instruction by the Engineer, the Contractor shall comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.</p> <p>(4) Other Hazardous Substances</p> <p>The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either existing on the Site or used in the Works.</p> <p>(5) Prevention</p> <p>(a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and</p> <p>(b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowsers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE</p> <p>(a) If it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and</p> <p>(b) For details of PPE refer to JSSS 2.9.1 [Personal Protective Equipment (PPE)].</p> <p>2.1.2 Poor Ventilation</p> <p>(1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation.</p> <p>(2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels.</p> <p>(3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9.1 [Personal Protective Equipment (PPE)].</p> <p>(4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. 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2.1.3 Noise

(5) Standards

By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart D - Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

(6) Preventive Measures

To prevent noise damage to Contractor’s Personnel, which may occur when noise levels exceed 90 dB (referred to as “intense noise” in JSSS), the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls to within the levels of Table D-2: **Permissible Noise Exposures** of the OSHA Standard referred to above, if at all possible;

Table D-2: Permissible Noise Exposures

Duration per day, hours	Sound level dBA slow response	Duration per day, hours	Sound level dBA slow response
8	90	1½	102
6	92	1	105
4	95	½	110
3	97	¼ or less	115
2	100		

- (b) If such controls are not possible ~~of if they fail~~ to reduce sound levels within the levels of Table D-2, provide PPE for all Contractor’s Personnel as specified in JSSS エラー! 参照元が見つかりません。 [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard;

- (c) Post warning signs at the work area to make all Contractor’s Personnel aware that ear protection must be worn; and

- (d) In all cases where the sound levels exceed the values shown in Table D-2, a continuing effective hearing conservation program **specified in (3) below shall be implemented.**

(7) Hearing Conservation Program

- (a) **The Contractor shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in order to accurately identify any Contractor’s Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8-hour time-weighted average.**

- (b) **The Contractor must monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure**

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- (e) The Contractor shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in order to accurately identify any Contractor’s Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8-hour time-weighted average.

- (f) The Contractor must monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure

measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. The Contractor shall choose the monitoring method that best suits each individual situation.

2.1.4 Further Requirements for Dangerous Work

Further to the requirements of JSSS 1.19 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, and for this purpose the Contractor shall:

- (1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, trade effluent and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work.
- (2) Safely isolate the supply and flow of any chemical or other potentially harmful materials and gases in the Site during the period of any work and safely reconnect or continue the same after the work is finished.
- (3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [General Safety Measures].
- (4) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [Prohibition of Entry - Dangerous Work].

2.1.5 High and Low Temperatures and Humidity

- (1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by:
 - (a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground;
 - (b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working;
 - (c) Where permitted by the Engineer under the hot climate carrying out work during the night when temperatures and humidity are lower;
 - (d) Providing drinking water and supplement that allow salt replenishment at work place;
 - (e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover;
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<p>working times; and</p> <p>(g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold.</p> <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p> <p>2.1.6 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.29 [<i>Safety Reports</i>].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <p>(a) The pre-existent conditions for all periods of Dangerous Work;</p> <p>(b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated;</p> <p>(c) Noise levels at work places that generate intense noise;</p> <p>(d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.1. [<i>Dangerous Work</i>], JSSS 2.1.4 [<i>Further Requirements for Dangerous Work</i>] and JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>].</p> <p>(a) Values of limits of measurement items:</p> <p>(i) Oxygen concentration less than 19.0% and more than 23.5%.</p>	<p>(f) Allowing work breaks and reducing excessive and continuous working times; and</p> <p>(g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold.</p> <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p> <p>2.1.6 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.29 [<i>Safety Reports</i>].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <p>(a) The pre-existent conditions for all periods of Dangerous Work;</p> <p>(b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated;</p> <p>(c) Noise levels at work places that generate intense noise;</p> <p>(d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.1. 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<ul style="list-style-type: none"> (ii) Hydrogen sulphide concentration more than 10 ppm (short-term exposure limit) or 5 ppm (long term exposure limit); (iii) Carbon dioxide concentration more than 15,000 ppm (short-term exposure limit) or 5,000 ppm (long term exposure limit); (iv) Values of limits given in EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1, for the monitoring items specified in the Particular Safety Specification.. <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p>	<ul style="list-style-type: none"> (ii) Hydrogen sulphide concentration more than 10 ppm (short-term exposure limit) or 5 ppm (long term exposure limit); (iii) Carbon dioxide concentration more than 15,000 ppm (short-term exposure limit) or 5,000 ppm (long term exposure limit); (iv) Values of limits given in EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1, for the monitoring items specified in the Particular Safety Specification.. <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p>	<ul style="list-style-type: none"> (ii) Hydrogen sulphide concentration more than 10 ppm (short-term exposure limit) or 5 ppm (long term exposure limit); (iii) Carbon dioxide concentration more than 15,000 ppm (short-term exposure limit) or 5,000 ppm (long term exposure limit); (iv) Values of limits given in EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1, for the monitoring items specified in the Particular Safety Specification.. <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p>
<p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1.General</p> <ul style="list-style-type: none"> (1) The Contractor is reminded of his obligations under GC 4.8 [<i>Safety Procedures</i>] and GC 4.22 [<i>Security of the Site</i>] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site. (2) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site. (3) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary request their assistance to remove any trespassers from the Site. (4) Such measures shall include (but are not restricted to) the following requirements of this Section. <p>2.2.2.Secure Site Perimeter</p> <p>The Contractor shall secure the perimeter of the Site to prevent access to the Site by unauthorised persons as specified below unless otherwise stated in the Particular Safety Specification.</p> <ul style="list-style-type: none"> (1) Fencing <ul style="list-style-type: none"> (a) Enclose the perimeter of the Site with secure fencing; (b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas; (c) Provide secure entry points with lockable gates or barrier; and (d) Provide and maintain signs clearly advising/warning against entry. 	<p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1.General</p> <ul style="list-style-type: none"> (1) The Contractor is reminded of his obligations under GC 4.8 [<i>Safety Procedures</i>] and GC 4.22 [<i>Security of the Site</i>] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site. (2) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site. (3) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary request their assistance to remove any trespassers from the Site. (4) Such measures shall include (but are not restricted to) the following requirements of this Section. <p>2.2.2.Secure <u>Site Working Area</u> Perimeter</p> <p>The Contractor shall secure the perimeter of the <u>working area</u>Site to prevent access to the Site by unauthorised persons as specified below unless otherwise stated in the Particular Safety Specification.</p> <p>JC: 2.2.2:Secure Working Area Perimeterとこちらからお願いしたものが Secure Site Perimeterとなっていますが、Working Areaに戻しています。御社の説明に「Secure Working Area Perimeter is specified in JSSS 2.3」という記述がありますが、2.3には Dangerous Work に関連することに限定した記述となっており、一般的な記述ではありません。</p> <p>2.2.2: JC requested to change to 2.2.2:Secure Working Area Perimeter but NK draft is still Secure Site Perimeter therefore JC changed again to Working Area. NK explanation is that Secure Working Area Perimeter is specified in JSSS 2.3. The 2.3 specifies regarding only Dangerous Work but not general requirements.</p> <p>JCCS 2.3 specifies as follows:</p>	<p>2.2 RISK CONTROL AROUND THE SITE</p> <p>2.2.1.General</p> <ul style="list-style-type: none"> (1) The Contractor is reminded of his obligations under GC 4.8 [<i>Safety Procedures</i>] and GC 4.22 [<i>Security of the Site</i>] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site. (2) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site. (3) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary request their assistance to remove any trespassers from the Site. (4) Such measures shall include (but are not restricted to) the following requirements of this Section. <p>2.2.2.Secure <u>Working Area</u> Perimeter</p> <p>The Contractor shall secure the perimeter of the <u>Site working area</u> to prevent access to the <u>Site working area</u> by unauthorised persons as specified below unless otherwise stated in the Particular Safety Specification.</p> <ul style="list-style-type: none"> (1) Fencing <ul style="list-style-type: none"> (a) Enclose the perimeter of the <u>Site working area</u> with secure fencing; (b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas; (c) Provide secure entry points with lockable gates or barrier; and (d) Provide and maintain signs clearly advising/warning against

<p>(2) Site perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.</p> <p>(3) Full details of Site perimeter fencing including scope, dimensions and specifications shall be referred to the Particular Safety Specification.</p> <p>2.2.3.Measures for Road Occupation</p> <p>(1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:</p> <p>(a) Prepare a road usage plan and submit it to the engineer and the relevant authorities, and obtain necessary permits, prior to road use;</p> <p>(b) Obtain the approval and necessary permits of the relevant authorities before any road closure, diversion or other traffic restrictions are applied;</p> <p>(c) Take necessary measures to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(e) Remove Contractor's Equipment during non-working periods (e.g. night time and weekends), store safely away from the works, provide temporary covers or barriers, lighting and warning signs, leave the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident;</p> <p>(f) In case the relevant authority approves the Contractor to store Contractor's Equipment safely during non-working periods (e.g.</p>	<p>2.3.2. Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>NK: Referring to the last JC comments, NK revises as commented. NK considers JC wants to specify fencing in practical way taking into the perimeter of the long rail way projects.</p> <p>JC: 以下同様に必要な部分を修正 Please revise other part as same. NK: revises as commented.</p> <p>(1) Fencing</p> <p>(a) Enclose the perimeter of the Site with secure fencing;</p> <p>(b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas;</p> <p>(c) Provide secure entry points with lockable gates or barrier; and</p> <p>(d) Provide and maintain signs clearly advising/warning against entry.</p> <p>(2) Site perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.</p> <p>(3) Full details of Site perimeter fencing including scope, dimensions and specifications shall be referred to the Particular Safety Specification.</p> <p>2.2.3. Measures for Road Occupation</p> <p>(1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:</p> <p>(a) Prepare a road usage plan and submit it to the engineer and the relevant authorities, and obtain necessary permits, prior to road use;</p> <p>(b) Obtain the approval and necessary permits of the relevant authorities before any road closure, diversion or other traffic restrictions are applied;</p> <p>(c) Take necessary measures to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(e) Remove Contractor's Equipment during non-working periods (e.g. night time and weekends), store safely away from the works, provide temporary covers or barriers, lighting and warning signs, leave the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident;</p> <p>— In case the relevant authority approves the Contractor to store Contractor's Equipment safely during non-working periods (e.g. night time and weekends), provide temporary barriers, lighting and warning signs, keep the Site in an orderly and safe condition</p>	<p>entry.</p> <p>(2) Site working area perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.</p> <p>(3) Full details of Site working area perimeter fencing including scope, dimensions and specifications shall be referred to the Particular Safety Specification.</p> <p>2.2.3. Measures for Road Occupation</p> <p>(1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:</p> <p>(a) Prepare a road usage plan and submit it to the engineer and the relevant authorities, and obtain necessary permits, prior to road use;</p> <p>(b) Obtain the approval and necessary permits of the relevant authorities before any road closure, diversion or other traffic restrictions are applied;</p> <p>(c) Take necessary measures to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p>
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<p>night time and weekends), provide temporary barriers, lighting and warning signs, keep the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident; and</p> <p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [<i>Spotters and Flagmen</i>]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4. Temporary Road Signs</p> <p>(3) For disseminating necessary information on roads adjacent to the Site, the Contractor shall:</p> <p>(g) Provide standard road signs in the same colours and format as those used by the road authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs;</p> <p>(h) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(i) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(4) Maintain the various signs regularly, including repairing, painting and cleaning, and ensuring that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5. Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect against accident.</p> <p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p> <p>2.2.6. Community Relations</p>	<p>and regularly maintain and inspect to remove any risk of accident; and</p> <p>JC: 2.2.3(1) (e)(f): 削除しています。理由は既に前回付してある JICA コメント通りです。(d)の記述は夜間等の non-working hours にも適用されるはずですが。</p> <p>2.2.3(1) (e)(f): JC deleted. The reason is as commented. The requirements of (d) apply to the non-working hours including night time.</p> <p>NK: deleted as commented.</p> <p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [<i>Spotters and Flagmen</i>]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4. 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Community Relations</p> <p>(4) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of</p>	<p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [<i>Spotters and Flagmen</i>]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4. 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<p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(j) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community; and</p> <p>(k) If so required in the Particular Safety Specification, conduct traffic safety and awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>	<p>comprehensive information about the Project to the nearby community; and</p> <p>(b) If so required in the Particular Safety Specification, conduct traffic safety and awareness activities for the local community.</p> <p>(5) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(6) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>	<p>comprehensive information about the Project to the nearby community; and</p> <p>(i) If so required in the Particular Safety Specification, conduct traffic safety and awareness activities for the local community.</p> <p>(8) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(9) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>
<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1.General</p> <p>(1) Non-authorized personnel in this context shall mean Contractor's Personnel, Employer's Personnel or any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official "permit to work" issued to them by the HSO.</p> <p>(2) The Contractor shall prohibit non-authorized personnel from entering areas where Dangerous Work is being undertaken.</p> <p>(3) For general requirements of Dangerous work refer to JSSS 1.19 [<i>Dangerous Work</i>].</p> <p>(4) The Contractor shall prepare permits to work according to characteristics of the Dangerous Work referring to the requirements of OSHA Subpart AA-Confined Spaces in Construction, § 1926.1204 Permit-required confined space program, § 1926.1205 Permitting process, and § 1926.1206 Entry permit.</p> <p>2.3.2.Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of non-authorized personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>2.3.3.Example of Dangerous Work</p> <p>For clarity Dangerous Work is understood also to include the following for example:</p> <p>(1) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals, gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p>	<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1. General</p> <p>(1) Non-authorized personnel in this context shall mean Contractor's Personnel, Employer's Personnel or any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official "permit to work" issued to them by the HSO.</p> <p>(2) The Contractor shall prohibit non-authorized personnel from entering areas where Dangerous Work is being undertaken.</p> <p>(3) For general requirements of Dangerous work refer to JSSS 1.19 [<i>Dangerous Work</i>].</p> <p>(4) The Contractor shall prepare permits to work according to characteristics of the Dangerous Work referring to the requirements of OSHA Subpart AA-Confined Spaces in Construction, § 1926.1204 Permit-required confined space program, § 1926.1205 Permitting process, and § 1926.1206 Entry permit.</p> <p>2.3.2.Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of non-authorized personnel and shall constantly communicate with and monitor the safety of assigned workers. 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The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>2.3.5.Example of Dangerous Work</p> <p>For clarity Dangerous Work is understood also to include the following for example:</p> <p>(1) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals, gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p>

<ul style="list-style-type: none"> (2) Welding work, hot cutting work or demolition work. (3) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter. (4) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold (5) Work in areas where there is potential exposure to harmful radiation or ultrasound. (6) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment]. (7) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe. (8) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented. (9) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions. 	<ul style="list-style-type: none"> (2) Welding work, hot cutting work or demolition work. (3) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter. (4) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold (5) Work in areas where there is potential exposure to harmful radiation or ultrasound. (6) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment]. (7) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe. (8) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented. (9) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions. 	<ul style="list-style-type: none"> (2) Welding work, hot cutting work or demolition work. (3) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter. (4) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold (5) Work in areas where there is potential exposure to harmful radiation or ultrasound. (6) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment]. (7) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe. (8) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented. (9) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.
<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>In accordance with the definition provided in JSSS Annex1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p> <p>2.4.2. Duties</p> <p>Duties include for example:</p> <ul style="list-style-type: none"> (1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out. (2) Giving appropriate guidance and signals during construction equipment operations to preventing the construction equipment tipping, overturning or falling. (3) Giving appropriate guidance and signals to prevent the Contractor's Personnel from being struck or pinned by construction equipment. (4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing. (5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines. (6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's 	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>In accordance with the definition provided in JSSS Annex1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p> <p>2.4.2. Duties</p> <p>Duties include for example:</p> <ul style="list-style-type: none"> (1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out. (2) Giving appropriate guidance and signals during construction equipment operations to preventing the construction equipment tipping, overturning or falling. (3) Giving appropriate guidance and signals to prevent the Contractor's Personnel from being struck or pinned by construction equipment. (4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing. (5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines. (6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's 	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>In accordance with the definition provided in JSSS Annex1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p> <p>2.4.2. Duties</p> <p>Duties include for example:</p> <ul style="list-style-type: none"> (1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out. (2) Giving appropriate guidance and signals during construction equipment operations to preventing the construction equipment tipping, overturning or falling. (3) Giving appropriate guidance and signals to prevent the Contractor's Personnel from being struck or pinned by construction equipment. (4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing. (5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines. (6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's

<p>Equipment is working, construction operations are proceeding, vehicles are passing or where accidents is likely to occur.</p> <p>(7) Monitoring working locations and conditions and alerting relevant Contractor's Personnel if necessary.</p> <p>(8) Any other similar duties and assistance.</p> <p>2.4.3. Placement</p> <p>(1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed.</p> <p>(2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention.</p> <p>2.4.4. Safety</p> <p>The Contractor shall:</p> <p>(1) Ensure the safety of Spotters when directing vehicles or Contractor's Equipment.</p> <p>(2) Ensure that Spotters and drivers agree on hand signals before reversing.</p> <p>(3) Instruct Spotters to maintain visual contact at all times with the driver while the vehicle is reversing.</p> <p>(4) Instruct drivers to stop reversing immediately if they lose sight of the Spotter.</p> <p>(5) Not give Spotters additional duties while they are already acting as Spotters.</p> <p>(6) Instruct Spotters not to use personal mobile phones, personal headphones, or other items which could pose a distraction during spotting activities.</p> <p>(7) Provide Spotters with high-visibility clothing, especially during night operations.</p> <p>2.4.5. Signals</p> <p>(1) To avoid the risk of injury to the Contractor's Personnel when operating Contractor's Equipment, the Contractor shall establish a standardised signal system and appoint a Spotter to give necessary signals to the Contractor's Personnel.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.</p> <p>(3) The Contractor shall inform and remind all Contractor's Personnel of the established standardised signal system as follows:</p> <p>(a) By training all Contractor's Personnel including those designated as Spotters at the time they first enter the Site on the signals;</p> <p>(b) By re-confirming with the Contractor's Personnel, the established standardised signal system in the TBM before the start of the work each day; and</p> <p>(c) By posting signboards on Site where required showing the standard signals and sticking a smaller-sized version directly on the concerned Contractor's Equipment.</p> <p>2.4.6. Qualification of Personnel</p> <p>The Contractor shall ensure that all Spotters possess sufficient experience</p>	<p>Equipment is working, construction operations are proceeding, vehicles are passing or where accidents is likely to occur.</p> <p>(7) Monitoring working locations and conditions and alerting relevant Contractor's Personnel if necessary.</p> <p>(8) Any other similar duties and assistance.</p> <p>2.4.3. Placement</p> <p>(1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed.</p> <p>(2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention.</p> <p>2.4.4. 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<p>and ability and are adequately trained and supervised to perform their duties.</p> <p>2.4.7. Radios Communication tools</p> <p>The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, walkie-talkies to ensure effective and safe communications and train all personnel assigned to Spotters in their use.</p> <p>2.4.8. PPE</p> <p>The Contractor shall ensure Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>	<p>and ability and are adequately trained and supervised to perform their duties.</p> <p>2.4.7. Radios Communication tools</p> <p>The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, walkie-talkies to ensure effective and safe communications and train all personnel assigned to Spotters in their use.</p> <p>2.4.8. PPE</p> <p>The Contractor shall ensure Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>	<p>and ability and are adequately trained and supervised to perform their duties.</p> <p>2.4.7. Communication tools</p> <p>The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, walkie-talkies to ensure effective and safe communications and train all personnel assigned to Spotters in their use.</p> <p>2.4.8. PPE</p> <p>The Contractor shall ensure Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>
<p>2.5 FALL PREVENTION</p> <p>2.5.1. General</p> <p>(1) By reference to JSSS 1.4 [<i>JSSS - Laws and Reference Standards</i>], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for fall prevention complying with those the technical requirements for fall prevention as specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M – Fall Protection of “Part 1926 - Safety and Health Regulations for Construction” and as follows:</p> <p>(d) Requirements relating to fall protection for employees workers working on scaffolds shall comply with in Subpart L - Scaffolds;</p> <p>(e) Requirements relating to fall protection for employees’ workers working on cranes and derricks shall comply with in Subpart CC - Cranes and Derricks in Construction;</p> <p>(f) Fall protection requirements for employees workers performing steel erection work (except for towers and tanks) shall comply with in Subpart R - Steel Erection;</p> <p>(g) Requirements relating to fall protection for employees workers working on certain types of equipment used in tunnelling operations shall comply with in Subpart S - Underground Construction, Caissons, Cofferdams and Compressed Air;</p> <p>(h) Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers shall comply with in §1926.105 Safety nets;</p> <p>(i) Requirements relating to fall protection for employees workers working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment shall comply with in Subpart V - Electric Power Transmission and Distribution; and</p> <p>(j) Requirements relating to fall protection for employees workers working on stairways and ladders are provided in Subpart X - Stairways and Ladders.</p>	<p>2.5 FALL PREVENTION</p> <p>2.5.1.General</p> <p>(1) By reference to JSSS 1.4 [<i>JSSS - Laws and Reference Standards</i>], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for fall prevention complying with those the technical requirements for fall prevention as specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M – Fall Protection of “Part 1926 - Safety and Health Regulations for Construction” and as follows:</p> <p>(a) Requirements relating to fall protection for employees workers working on scaffolds shall comply with in Subpart L - Scaffolds;</p> <p>(b) Requirements relating to fall protection for employees’ workers working on cranes and derricks shall comply with in Subpart CC - Cranes and Derricks in Construction;</p> <p>(c) Fall protection requirements for employees workers performing steel erection work (except for towers and tanks) shall comply with in Subpart R - Steel Erection;</p> <p>(d) Requirements relating to fall protection for employees workers working on certain types of equipment used in tunnelling operations shall comply with in Subpart S - Underground Construction, Caissons, Cofferdams and Compressed Air;</p> <p>(e) Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers shall comply with in §1926.105 Safety nets;</p> <p>(f) Requirements relating to fall protection for employees workers working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment shall comply with in Subpart V - Electric Power Transmission and Distribution; 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<p>(2) The Contractor shall develop safety procedures for personnel who are engaged in inspection, investigation, or assessment to confirm the workplace conditions for the safety of workers prior to the actual start of construction work or to confirm the site condition for the safety of workers after all construction work has been completed.</p> <p>(3) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(4) The Contractor must pay special attention to whether a restraint system (PFRS) or arrest (PFAS) system is required, noting the defined terms in Chapter 1 General for each of these systems.</p> <p>(5) As a general rule, the Contractor shall take “fall restraint” measures wherever practicable rather than “fall arrest” measures.</p> <p>(6) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS</p> <p>2.5.2. Height Thresholds The threshold for fall protection in construction work is 2m. The Contractor must provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3. Facilities for Ascending and Descending When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor’s Personnel to safely access and descend from such work levels.</p> <p>2.5.4. Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p>	<p>(2) For use of personnel who are engaged in inspection, investigation, or assessment. The Contractor shall develop safety procedures for personnel who are engaged in inspection, investigation, or assessment to confirm the workplace conditions for the safety of workers prior to the actual start of construction work or to confirm the site condition for the safety of workers after all construction work has been completed.</p> <p>JC: これは墜落に限らない一般的な事項です。これはむしろ総則に入れるべき事項ではないでしょうか。(又は総則に既に類似の表現があるなら削除)</p> <p>This is general requirement not only for fall prevention. It may be included in Chapter 1. (if already specified in Chapter 1, it shall be deleted.)</p> <p>JC6: 2.5.1(2): 御社の説明の意図に沿った内容にするならば、for use of personnel who engage in.....とした方が良いと思われ、そのように修正しています。但し、この条項が本当にこの場所に置いておくことがふさわしいか否かは再検討願います。 2.5.1(2): JC considers it is better to revise it to “for use of personnel who engage in...” to specify the same content as the intention in NK’s explanation. Please reconsider where is proper location to specify this clause.</p> <p>(3) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(4) The Contractor must pay special attention to whether a restraint system (PFRS) or arrest (PFAS) system is required, noting the defined terms in Chapter 1 General for each of these systems.</p> <p>JC: 不要ではないでしょうか？ 削除をご検討ください。 Is (4) necessary? Please consider deleting (4). NK: Deleted.</p> <p>(5) As a general rule, the Contractor shall take “fall restraint” measures wherever practicable rather than “fall arrest” measures.</p> <p>(6) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS</p> <p>2.5.2. Height Thresholds The threshold for fall protection in construction work is 2m. 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The Contractor shall develop safety procedures for personnel who are engaged in inspection, investigation, or assessment to confirm the workplace conditions for the safety of workers prior to the actual start of construction work or to confirm the site condition for the safety of workers after all construction work has been completed.</p> <p>To MD: Please consider the JC comment about the location of (2), may be in Chapter 1.</p> <p>(3) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(4) As a general rule, the Contractor shall take “fall restraint” measures wherever practicable rather than “fall arrest” measures.</p> <p>(5) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS</p> <p>2.5.2. 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<p>(2) Accordingly, and in In advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk pre- assessment including checking the following and shall record the results:</p> <ul style="list-style-type: none"> (a) Work areas and the conditions of adjacent areas; (b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets; (c) Status of access leading to work areas and any anchorages; and, (d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition. 	<p>(2) Accordingly, and in In advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk pre- assessment including checking the following and shall record the results:</p> <ul style="list-style-type: none"> (a) Work areas and the conditions of adjacent areas; (b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets; (c) Status of access leading to work areas and any anchorages; and, (d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition. 	<p>(2) Accordingly, and in In advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk pre- assessment including checking the following and shall record the results:</p> <ul style="list-style-type: none"> (a) Work areas and the conditions of adjacent areas; (b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets; (c) Status of access leading to work areas and any anchorages; and, (d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.
<p>2.5.5 Handrails</p> <p>The Contractor shall provide handrails at places where there is risk of fall.</p> <p>(1) Handrails shall be complete with top-rails of minimum 85 cm high and mid-rails placed at a height of 35 - 50 cm.</p> <p>(2) The top-rail shall be designed to withstand 90 kg. of horizontal force and mid-rails 70 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:</p> <ul style="list-style-type: none"> (a) Displaying appropriate warning signs; (b) Assigning a Spotter to direct non-essential Contractor's Personnel away; (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets. (d) Prohibiting entry to the working area of any non-authorised Contractor's Personnel (e) Handrails shall be restored immediately after the necessity for removal has ended. 	<p>2.5.5 Handrails</p> <p>The Contractor shall provide handrails at places where there is risk of fall.</p> <p>(1) Handrails shall be complete with top-rails of minimum 85 cm high and mid-rails placed at a height of 35 - 50 cm.</p> <p>(2) The top-rail shall be designed to withstand 90 kg. of horizontal force and mid-rails 70 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:</p> <ul style="list-style-type: none"> (a) Displaying appropriate warning signs; (b) Assigning a Spotter to direct non-essential Contractor's Personnel away; (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets. (d) Prohibiting entry to the working area of any non-authorised Contractor's Personnel (e) Handrails shall be restored immediately after the necessity for removal has ended. 	<p>2.5.5 Handrails</p> <p>The Contractor shall provide handrails at places where there is risk of fall.</p> <p>(1) Handrails shall be complete with top-rails of minimum 85 cm high and mid-rails placed at a height of 35 - 50 cm.</p> <p>(2) The top-rail shall be designed to withstand 90 kg. of horizontal force and mid-rails 70 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:</p> <ul style="list-style-type: none"> (a) Displaying appropriate warning signs; (b) Assigning a Spotter to direct non-essential Contractor's Personnel away; (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets. (d) Prohibiting entry to the working area of any non-authorised Contractor's Personnel (e) Handrails shall be restored immediately after the necessity for removal has ended.
<p>2.5.6. Toeboards</p> <p>(1) Toeboards shall be provided to all handrails to prevent risk of Falling Objects.</p> <p>(2) Toeboards shall be minimum 10cm high from top edge to the level of the working platform, runway or ramp.</p> <p>(3) Where material, is piled to such height that a 10cm toeboard does not provide protection, panelling from floor to mid-rail, or to top-rail shall be provided.</p>	<p>2.5.6. Toeboards</p> <p>(1) Toeboards shall be provided to all handrails to prevent risk of Falling Objects.</p> <p>(2) Toeboards shall be minimum 10cm high from top edge to the level of the working platform, runway or ramp.</p> <p>(3) Where material, is piled to such height that a 10cm toeboard does not provide protection, panelling from floor to mid-rail, or to top-rail shall be provided.</p>	<p>2.5.6. Toeboards</p> <p>(1) Toeboards shall be provided to all handrails to prevent risk of Falling Objects.</p> <p>(2) Toeboards shall be minimum 10cm high from top edge to the level of the working platform, runway or ramp.</p> <p>(3) Where material, is piled to such height that a 10cm toeboard does not provide protection, panelling from floor to mid-rail, or to top-rail shall be provided.</p>
<p>2.5.7. Temporary Walkways and Passageways</p> <p>(1) Installation of walkways and passageways</p>	<p>2.5.7. Temporary Walkways and Passageways</p> <p>(1) Installation of walkways and passageways</p>	<p>2.5.7. Temporary Walkways and Passageways</p> <p>(1) Installation of walkways and passageways</p>

<p>The Contractor shall provide safe routes leading to, within and around working areas that ensure safety of passage for Contractor's Personnel and these shall be effectively maintained at all times.</p> <p>The Contractor shall display signs clearly indicating the use, extent and directions so that the Contractor's Personnel will adhere to these routes and other activities will be prevented from accessing these routes.</p> <p>(2) Handrails</p> <p>At any point where there may be a risk of Contractor's Personnel falling from temporary walkways and passageways, the Contractor shall provide handrails as specified in JSSS エラー! 参照元が見つかりません。 [Handrails].</p> <p>Alternatively, the Contractor shall provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8. Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms can be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 5(4).</p> <p>2.5.9. Preventing Falls from the Ends and Openings of Working Platforms</p> <p>(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.</p> <p>(2) The Contractor shall provide handrails to all ends, edges and openings.</p> <p>(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.</p> <p>(4) If for any reason it is not possible to enclose the areas, or provide covers or when same is ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 [Handrails].</p> <p>2.5.10. Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <p>(1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access.</p>	<p>The Contractor shall provide safe routes leading to, within and around working areas that ensure safety of passage for Contractor's Personnel and these shall be effectively maintained at all times.</p> <p>The Contractor shall display signs clearly indicating the use, extent and directions so that the Contractor's Personnel will adhere to these routes and other activities will be prevented from accessing these routes.</p> <p>(2) Handrails</p> <p>At any point where there may be a risk of Contractor's Personnel falling from temporary walkways and passageways, the Contractor shall provide handrails as specified in JSSS エラー! 参照元が見つかりません。 [Handrails].</p> <p>Alternatively, the Contractor shall provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8. 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Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <p>(1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access.</p>	<p>The Contractor shall provide safe routes leading to, within and around working areas that ensure safety of passage for Contractor's Personnel and these shall be effectively maintained at all times.</p> <p>The Contractor shall display signs clearly indicating the use, extent and directions so that the Contractor's Personnel will adhere to these routes and other activities will be prevented from accessing these routes.</p> <p>(2) Handrails</p> <p>At any point where there may be a risk of Contractor's Personnel falling from temporary walkways and passageways, the Contractor shall provide handrails as specified in JSSS エラー! 参照元が見つかりません。 [Handrails].</p> <p>Alternatively, the Contractor shall provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8. 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- (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces.
- (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached.
- (4) Installing handrails where the slope shoulder is used as a passageway.
- (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system.
- (6) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in trench excavations that are 1.2 m or more in depth so as to require no more than 7.5 m of lateral travel for Contractor's Personnel.
- (7) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in deep excavations with/without shoring system and prohibiting all Contractor's Personnel from crossing on the shoring system.

2.5.11. Measures for Preventing Falls during Rope Access Work

- (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example:
 - (a) Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; and

- (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces.
- (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached.
- (4) Installing handrails where the slope shoulder is used as a passageway.
- (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system.
- (6) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in trench excavations that are 1.2 m or more in depth so as to require no more than 7.5 m of lateral travel for Contractor's Personnel.
- (7) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in deep excavations with/without shoring system and prohibiting all Contractor's Personnel from crossing on the shoring system.

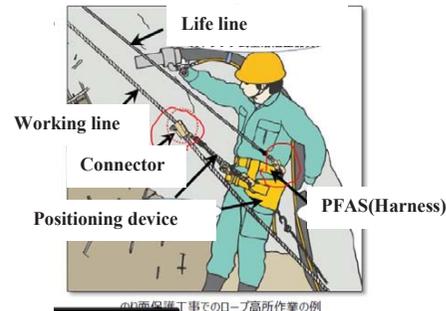
2.5.11. Measures for Preventing Falls during Rope Access Work

- (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example:
 - (a) Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; and

JC: 要修文. Required to revise (a).

JC7: 2.5.11(1)(a)にある Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; という部分は修正が必要だと考えます。親綱に結び付けるのは PFRS ではなく、身体保持器具なのではないでしょうか？添付の図を参照してください。

2.5.11(1)(a): JC considers that it needs to correct "Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached". The good to connect to working lines is not the PFRS but positioning device. Please refer to the attached figure.



NK: revised.

- (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces.
- (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached.
- (4) Installing handrails where the slope shoulder is used as a passageway.
- (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system.
- (6) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in trench excavations that are 1.2 m or more in depth so as to require no more than 7.5 m of lateral travel for Contractor's Personnel.
- (7) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in deep excavations with/without shoring system and prohibiting all Contractor's Personnel from crossing on the shoring system.

2.5.11. Measures for Preventing Falls during Rope Access Work

- (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example:
 - (a) Installing lifeline to which the PFAS is attached and working line to which the positioning device is attached; and

<p>(b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.</p> <p>(2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:</p> <p>(a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;</p> <p>(b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;</p> <p>(c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) The working line is anchored to two or more independent strong supports; and</p> <p>(e) The PFAS is securely attached to the harness and the connecting devices are compatible with the working line and lifeline used.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor's Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p> <p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chafed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor's Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide measures including providing Contractor's Personnel PPE to prevent any danger to Contractor's Personnel from falling objects.</p>	<p>(b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.</p> <p>(2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:</p> <p>(a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;</p> <p>(b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;</p> <p>(c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) The working line is anchored to two or more independent strong supports; and</p> <p>(e) The PFAS is securely attached to the harness and the connecting devices are compatible with the working line and lifeline used.</p> <p>JC: この記述はおかしくないでしょうか。2.5.13(2)(d)には The PFAS shall be the full harness type and shall comprise...という記述があり、これでは「ハーネスにハーネスを取り付ける」という意味になりませんか？</p> <p>日本語の原文は「接続器具を用いて確実に取り付けること。なお接続器具は使用する親綱に適合したものを使用すること」であり、忠実な翻訳になっていません。</p> <p>JC9: 2.5.11(2)(e): 記述がおかしいように思えます(「ハーネスをハーネスにつける?」)。修正を検討して下さい。ロープ高所作業におけるハーネス(添付の図は古いので胴ベルトですが)は親綱につけるのではないのでしょうか? 2.5.13(1)(b)にある PPE for という言葉は不要です。むしろここでは PPP(E)としての PFRS を論じています。</p> <p>2.5.11(2)(e): The description is strange "harness is attached to harness". Please consider correcting it. In rope work, harness should be connected with working lines. "PPE for" is not necessary in 2.5.13(1)(b). Here, PFRS is discussed as PPE.</p> <p>JC Revised as commented.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor's Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p> <p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chafed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor's Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide measures including providing Contractor's Personnel PPE to prevent any danger to Contractor's Personnel from falling objects.</p>	<p>(b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.</p> <p>(2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:</p> <p>(a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;</p> <p>(b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;</p> <p>(c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) The working line is anchored to two or more independent strong supports; and</p> <p>(e) The positioning device shall be securely connected to the working line with connectors and the connecting devices shall be compatible with the working line used.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor's Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p> <p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chafed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor's Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide measures including providing Contractor's Personnel PPE to prevent any danger to Contractor's Personnel from falling objects.</p>
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<p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and direct the work based on the Safety Plan and perform the following duties:</p> <ul style="list-style-type: none"> (a) Inform all Contractor’s Personnel of the content of the Method Statement and Safety Plan before commencement of the work; (b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified; (c) Permit the Contractor’s Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFRS, PFAS and PPE; and (d) Ensure Contractor’s Personnel use PFRS, PFAS correctly, and, have them fix the PFAS to the life lines- <p>2.5.12. Further Measures for Contractor’s Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including for example taking the following measures before any work commences:</p> <ul style="list-style-type: none"> (1) Conduct safety induction and education courses regarding fall risks for all Contractor’s Personnel who shall work on locations and operations where there is a risk of falling. (2) Prohibit the unauthorized removal of any fall prevention equipment and educate Contractor’s Personnel on the dangers of this action. (3) Educate Contractor’s Personnel on the proper storage and management of all safety equipment, including for example PPE, PFRS and PFAS. (4) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow. <p>2.5.13. Personal Protective Equipment for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor’s Personnel are subject to fall risks:</p> <p>(1) The Contractor shall provide PFRS as follows:</p> <ul style="list-style-type: none"> (a) PFRS shall be the same as PFAS specified below but designed to restrict the movement of workers and prevent them from reaching the edge of any working area and therefore eliminating the risk of a fall. 	<p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and direct the work based on the Safety Plan and perform the following duties:</p> <ul style="list-style-type: none"> (a) Inform all Contractor’s Personnel of the content of the Method Statement and Safety Plan before commencement of the work; (b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified; (c) Permit the Contractor’s Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFRS, PFAS and PPE; and (d) Ensure Contractor’s Personnel use PFRS, PFAS correctly, and, have them fix the PFAS to the life lines- <p>2.5.12. Further Measures for Contractor’s Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including for example taking the following measures before any work commences:</p> <ul style="list-style-type: none"> (1) Conduct safety induction and education courses regarding fall risks for all Contractor’s Personnel who shall work on locations and operations where there is a risk of falling. (2) Prohibit the unauthorized removal of any fall prevention equipment and educate Contractor’s Personnel on the dangers of this action. (3) Educate Contractor’s Personnel on the proper storage and management of all safety equipment, including for example PPE, PFRS and PFAS. (4) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow. <p>2.5.13. Personal Protective Equipment for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor’s Personnel are subject to fall risks:</p> <p>(1) The Contractor shall provide PFRS as follows:</p> <ul style="list-style-type: none"> (a) PFRS shall be the same as PFAS specified below but designed to restrict the movement of workers and prevent them from reaching the edge and opening of any working area and therefore eliminating the risk of a fall. <p>JC9: 9. 2.5.13(1)(a) に opening という言葉を加えています(2.5.9(1)の記述(端、開口部からの墜落防止の措置を取らなければならない、とするもの)の趣旨に合致すると思います。</p> <p>2.5.13(1)(a): “opening” is added to meet the requirement that fall prevention measures shall be taken at the edge and opening specified in 2.5.9(1).</p> <p>JC: added as commented.</p> <ul style="list-style-type: none"> (b) PPE for PFRS shall comprise of either a Safety Belt or body 	<p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and direct the work based on the Safety Plan and perform the following duties:</p> <ul style="list-style-type: none"> (a) Inform all Contractor’s Personnel of the content of the Method Statement and Safety Plan before commencement of the work; (b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified; (c) Permit the Contractor’s Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFRS, PFAS and PPE; and (d) Ensure Contractor’s Personnel use PFRS, PFAS correctly, and, have them fix the PFAS to the life lines- <p>2.5.12. 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<p>(b) PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p> <p>(2) The Contractor shall provide PFAS as follows:</p> <p>(a) The PFAS shall be the full harness type and shall comprise of a body harness, connectors, lanyard, deceleration device, lifeline, anchorage, or suitable combination of these.</p> <p>(b) The use of a Safety Belt for PFAS is prohibited except the case that if there is any risk of the Contractor's Personnel hitting the lower surface when the full harness type is used, the total fall clearance distance calculated as below is less than the distance between the point at which a worker would be anchored and any lower surface. The total fall clearance distance for PFAS with a shock-absorbing lanyard is calculated as the total of free fall distance, deceleration distance, D-ring shift, back D-ring height, and safety factor. (Refer to OSHA Technical Manual General Information, Section V: Chapter 4 Fall Protection in Construction, III. Measurements for Assessing Fall Hazards and Controls, A. Total Fall Clearance Distance for PFAS.)</p> <p>(c) PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself.</p> <p>(d) For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of anchored point, installed connector equipment, length of lanyard, etc.).</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Inspection of any safety equipment</p> <p>Before starting work for example using PFRS or PFAS, the systems and anchorages to which the systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.13. Portable Ladders and Stepladders</p> <p>For further requirements, refer to JSSS 7.4 [Walkways, Ladders and Stepladders]</p> <p>2.5.14. Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p>	<p>harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p> <p>JC: 不要. Not necessary. NK: Deleted.</p> <p>(2) The Contractor shall provide PFAS as follows:</p> <p>(a) The PFAS shall be the full harness type and shall comprise of a body harness, connectors, lanyard, deceleration device, lifeline, anchorage, or suitable combination of these.</p> <p>(b) The use of a Safety Belt for PFAS is prohibited except the case that if there is any risk of the Contractor's Personnel hitting the lower surface when the full harness type is used, the total fall clearance distance calculated as below is less than the distance between the point at which a worker would be anchored and any lower surface. The total fall clearance distance for PFAS with a shock-absorbing lanyard is calculated as the total of free fall distance, deceleration distance, D-ring shift, back D-ring height, and safety factor. (Refer to OSHA Technical Manual General Information, Section V: Chapter 4 Fall Protection in Construction, III. Measurements for Assessing Fall Hazards and Controls, A. 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Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p> <p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p>	<p>(b) PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p> <p>(2) The Contractor shall provide PFAS as follows:</p> <p>(a) The PFAS shall be the full harness type and shall comprise of a body harness, connectors, lanyard, deceleration device, lifeline, anchorage, or suitable combination of these.</p> <p>(b) The use of a Safety Belt for PFAS is prohibited except the case that if there is any risk of the Contractor's Personnel hitting the lower surface when the full harness type is used, the total fall clearance distance calculated as below is less than the distance between the point at which a worker would be anchored and any lower surface. The total fall clearance distance for PFAS with a shock-absorbing lanyard is calculated as the total of free fall distance, deceleration distance, D-ring shift, back D-ring height, and safety factor. (Refer to OSHA Technical Manual General Information, Section V: Chapter 4 Fall Protection in Construction, III. Measurements for Assessing Fall Hazards and Controls, A. Total Fall Clearance Distance for PFAS.)</p> <p>(c) PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself.</p> <p>(d) For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of anchored point, installed connector equipment, length of lanyard, etc.).</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Inspection of any safety equipment</p> <p>Before starting work for example using PFRS or PFAS, the systems and anchorages to which the systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.13. 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<p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p> <p>When working on, accessing or crossing, floor or roof areas (including uncompleted areas under construction), or fragile roofs such as those covered with slates, tiles or other non-loadbearing coverings or where there is any risk of breaking and or falling through such areas, the Contractor shall provide continuous bearing boards for workers to walk on, with a minimum width of 60 cm or sufficiently wider to provide safe transit and where necessary to spread the bearing load on the surface and avoid penetration. The boards shall be fixed together and secured to the underlying surface by tying with ropes or clips to prevent any movement.</p> <p>Unless otherwise approved by the HSO, handrails shall be provided to both sides.</p> <p>If the underlying surface or roofing is too fragile for such measures and access is required, the Contractor shall provide an independent scaffolding boarded walkway with handrails both sides, which does not bear upon the existing roof but that is supported independently by a scaffolding structure.</p> <p>(4) Demolition or Alteration of Buildings and Structures</p> <p>When carrying out demolition or alteration of buildings or structures and where there is a risk of fall for Contractor's Personnel, the Contractor shall take the following measures:</p> <p>(a) Appoint an Operation Leader to be engaged on the work;</p> <p>(b) Safely supervise the work; and</p> <p>(c) Inform and train Contractor's Personnel engaged in the said work so that they are aware in advance of the work methods and procedures.</p> <p>2.5.15. Safety Nets</p> <p>(1) The Contractor shall provide safety nets when workplaces are more than 7.50m above the lower ground or water surface and where the use of another type of fall prevention system is impractical or has been removed.</p> <p>(2) Operations shall not be undertaken until the net is in place and has been inspected and tested.</p> <p>(3) Nets shall extend 2.5m beyond the edge of the work surface where Contractor's Personnel may be at risk and shall be installed as close under the working surface as practical but in no case more than 7.50m below such work surface.</p> <p>(4) Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.</p> <p>(5) The mesh size of nets shall not exceed 15 cm by 15 cm. All new nets shall bear a label of proof test from the manufacturer that they can withstand 23,700 Nm minimum impact resistance. Edge ropes shall provide a minimum breaking strength of 2,270kg.</p> <p>(6) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.</p>	<p>When working on, accessing or crossing, floor or roof areas (including uncompleted areas under construction), or fragile roofs such as those covered with slates, tiles or other non-loadbearing coverings or where there is any risk of breaking and or falling through such areas, the Contractor shall provide continuous bearing boards for workers to walk on, with a minimum width of 60 cm or sufficiently wider to provide safe transit and where necessary to spread the bearing load on the surface and avoid penetration. 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		(6) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.
<p>2.6 FALLING OBJECTS</p> <p>2.6.1. General</p> <p>The Contactor shall take all necessary measures to avoid danger and prevent damage and injury to Contractor’s Personnel, Employer’s Personnel and any other persons including third parties that are on or adjacent to or in the vicinity of the Site whether connected with the Works or otherwise, and who may be at risk from Falling Objects.</p> <p>In general, this shall be accomplished by:</p> <ol style="list-style-type: none"> (1) Providing secure temporary barriers to prevent or capture Falling Objects, designed by the Contractor to be of sufficient strength to capture all Falling Objects without perforating and which, where necessary, shall be of an aesthetic design to be approved the Engineer. (2) Providing a safe means of raising and lowering Goods, tools, waste and debris (3) Providing an exclusion zone prohibiting persons and traffic from entering areas where Falling Objects could be a risk, including providing pedestrian and traffic diversions. The exclusion zone shall include the cases that it is extremely difficult to provide mesh sheets or toe-board due to the nature of the work, or mesh sheets or baseboards are temporarily removed. (4) Using PPE. (5) Providing coloured warning tape, barriers and signage warning of “DANGER FALLING OBJECTS” in addition to all other preventive measures. <p>2.6.2. General Preventive Measures</p> <ol style="list-style-type: none"> (1) All horizontal boarded areas of scaffolding shall be provided with a substantial and continuous toe-board to all edges. (2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas. (3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or openings of external walls where there is no scaffolding. (4) Safe passageways with substantial secured roof, walls and floors sides shall also be provided over entrances and exits. (5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways passageways, footpaths and roads, including those on areas beyond the Site boundary. (6) Protective roofs and covered walkways passageways shall be provided wherever there is a risk over working areas, walkways passageways, footpaths and roads. (7) All protective structures including roofs, canopies, safety fans, projecting shelves and covered walkways passageways shall be fit for the purpose intended and provide a secure protective barrier capable 	<p>2.6 FALLING OBJECTS</p> <p>2.6.1. 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(5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways passageways, footpaths and roads, including those on areas beyond the Site boundary. (6) Protective roofs and covered walkways passageways shall be provided wherever there is a risk over working areas, walkways passageways, footpaths and roads. (7) All protective structures including roofs, canopies, safety fans, projecting shelves and covered walkways passageways shall be fit for the purpose intended and provide a secure protective barrier capable

<p>of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p> <p>(b) Sheet shall comply with BS 7955 or equivalent composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p> <p>(12) <u>When/Where</u> (?) the work place is close to public or private areas, roads, <u>footpaths</u>, buildings or houses <u>and</u> the like <u>along or outside</u> (?) the Site boundary and <u>where/when</u> (?) there is any risk that Falling Objects could endanger the safety of traffic and third parties <u>in such areas</u>, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>Note: To MD, please review the (12).</p> <p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs or covered walkways passageways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and place a Spotter to direct traffic and pedestrians.</p> <p>2.6.3. Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p>	<p>of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p> <p>(b) Sheet shall comply with BS 7955 or equivalent composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p> <p>(12) <u>When/Where</u> (?) the work place is close to public or private areas, roads, <u>footpaths</u>, buildings or houses <u>and</u> the like <u>along or outside</u> (?) the Site boundary and <u>where/when</u> (?) there is any risk that Falling Objects could endanger the safety of traffic and third parties <u>in such areas</u>, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>Note: To MD, please see JICA comments in other sheets and review the (12).</p> <p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs or covered walkways passageways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and place a Spotter to direct traffic and pedestrians.</p> <p>2.6.3. Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p>	<p>of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p> <p>(b) Sheet shall comply with BS 7955 or equivalent composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p> <p>(12) <u>When/Where</u> (?) the work place is close to public or private areas, roads, <u>footpaths</u>, buildings or houses <u>and</u> the like <u>along or outside</u> (?) the Site boundary and <u>where/when</u> (?) there is any risk that Falling Objects could endanger the safety of traffic and third parties <u>in such areas</u>, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>Note: as left.</p> <p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs or covered walkways passageways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and place a Spotter to direct traffic and pedestrians.</p> <p>2.6.4. Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p>
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<p>(a) Enclose areas where such operations are taking place, and provide protective screens or cover on storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.2 [Inspection, Maintenance and Repair] for grinding work equipment condition, use of protective covers and procedures for preventing danger due to tool breakage etc. and,</p> <p>(c) Ensure that workers use appropriate PPE such as head, face and eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [Measures against Strong Wind and Storms] in this Specification.</p> <p>2.6.4. Preventive Measures against Dropping Objects</p> <p>(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. scaffolding clips), generally and in no event from heights of 3m or above.</p> <p>(2) The Contractor shall use a crane to bring objects down from height of 3m or above. Alternatively, the Contractor may provide enclosed chutes to bring down objects and in addition, shall prohibit entry to the chute area or assign a Spotter.</p> <p>(3) Chutes shall be designed to prevent objects being scattered over a wide surrounding area.</p> <p>2.6.5. Prevention of Accumulation of Goods at High Levels-Height</p> <p>(1) The Contractor shall prohibit the accumulation and storage of Goods at height particularly on scaffolding and steel platforms frames under assembling and in any event (?) in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.</p> <p>(2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.</p> <p>(3) When temporarily stored at height, Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.</p> <p>(4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.5 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide</p>	<p>(a) Enclose areas where such operations are taking place, and provide protective screens or cover on storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.2 [Inspection, Maintenance and Repair] for grinding work equipment condition, use of protective covers and procedures for preventing danger due to tool breakage etc. and,</p> <p>(c) Ensure that workers use appropriate PPE such as head, face and eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [Measures against Strong Wind and Storms] in this Specification.</p> <p>2.6.4. Preventive Measures against Dropping Objects</p> <p>(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. scaffolding clips), generally and in no event from heights of 3m or above.</p> <p>(2) The Contractor shall use a crane to bring objects down from height of 3m or above. Alternatively, the Contractor may provide enclosed chutes to bring down objects and in such a case, shall prohibit entry to the chute area or assign a Spotter.</p> <p>JC10: 2.6.4(2): in addition よりも In such a case の方がふさわしいと思われ、その旨修正しています。 2.6.4(2): It is revised because JC considers "In such a case" is more suitable than "in addition". NK: revised as commented.</p> <p>(3) Chutes shall be designed to prevent objects being scattered over a wide surrounding area.</p> <p>2.6.5. Prevention of Accumulation of Goods at High Levels-Height</p> <p>(1) The Contractor shall prohibit the accumulation and storage of Goods at height particularly on scaffolding and steel platforms frames under assembling and in any event (?) in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.</p> <p>(2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.</p> <p>(3) When temporarily stored at height, Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.</p> <p>(4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.5 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g.</p>	<p>(a) Enclose areas where such operations are taking place, and provide protective screens or cover on storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.2 [Inspection, Maintenance and Repair] for grinding work equipment condition, use of protective covers and procedures for preventing danger due to tool breakage etc. and,</p> <p>(c) Ensure that workers use appropriate PPE such as head, face and eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [Measures against Strong Wind and Storms] in this Specification.</p> <p>2.6.5. Preventive Measures against Dropping Objects</p> <p>(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. scaffolding clips), generally and in no event from heights of 3m or above.</p> <p>(2) The Contractor shall use a crane to bring objects down from height of 3m or above. Alternatively, the Contractor may provide enclosed chutes to bring down objects and in such a case shall prohibit entry to the chute area or assign a Spotter.</p> <p>(3) Chutes shall be designed to prevent objects being scattered over a wide surrounding area.</p> <p>2.6.5. Prevention of Accumulation of Goods at Height</p> <p>(1) The Contractor shall prohibit the accumulation and storage of Goods at height particularly on scaffolding and steel platforms frames under assembling and in any event (?) in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.</p> <p>(2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.</p> <p>(3) When temporarily stored at height, Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.</p> <p>(4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.6 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g.</p>
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<p>additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>	<p>slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>	<p>slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>
<p>2.7 ADVERSE WEATHER REQUIREMENTS 2.7.1. General</p> <p>(3) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(4) Adverse climatic conditions and other conditions described in this Section are deemed to be foreseeable conditions within the Contractor's control and they shall not be construed as constituting a cause of delay giving any entitlement to extension of time under GC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's obligations or entitlements under the Contract.</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS 2.7.1. General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(2) Adverse climatic conditions and other conditions described in this Section are deemed to be foreseeable conditions within the Contractor's control and they shall not be construed as automatically constituting a cause of delay giving any entitlement to extension of time under GC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's obligations or entitlements under the Contract.</p> <p>JC: weather conditions は foreseeable かもしれませんが、within the Contractor's control になるものではありません。</p> <p>Weather conditions may be foreseeable, however, they are not within the Contractor's control.</p> <p>JC11: 2.7.1(2):悪天候に関する記述ですが、「foreseeable で EOT 等につながるものではない」と言い切ることは不適当です。修正しています。</p> <p>2.7.1(2): It is inappropriate to affirm "they shall not be construed as constituting a cause of delay giving any entitlement to extension of time under GC".</p> <p>Therefore, revision is made as above.</p> <p>NK: Issue 6 and JICA revised sentences Issue 6: (4) Adverse climatic conditions and other conditions described in this Section are deemed to be foreseeable conditions within the Contractors control and they shall not be construed as constituting a cause of delay giving any entitlement to extension of time under GC 8.4... 本節で規定する悪天候は、請負者がコントロールできる予測可能なものであり、工期延長の理由になると解釈されるべきではない。</p> <p>JICA revised : Adverse climatic conditions and other conditions described in this Section shall not be construed as automatically constituting a cause of delay giving any entitlement to extension of time under GC 8.4... 本節で規定する悪天候は、自動的に工期延長の理由になると解釈されるべきではない。</p> <p>NK3/14: The Contractor shall take measures specified in 2.7 for the both adverse climatic conditions and exceptionally adverse climatic conditions.</p> <p>SS considers that we can foresee the both conditions technically by the Contractor, for example, rainfall of 100 years, 1000 years return period and probable maximum rainfall.</p> <p>The boundary between exceptionally adverse climatic conditions and adverse climatic conditions is difficult to discuss here.</p> <p>NK3/14: Agreed to JICA revision.</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS 2.7.1. General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(2) Adverse climatic conditions and other conditions described in this Section are deemed to be foreseeable conditions within the Contractor's control and they shall not be construed as automatically constituting a cause of delay giving any entitlement to extension of time under GC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's obligations or entitlements under the Contract.</p> <p>To MD: I discussed JICA's comment on (2) with Mr Hayashi and want to revise as JICA revised. Please review the above and modify the sentence of JICA.</p>

<p>2.7.2. Preventive Measures</p> <ol style="list-style-type: none"> (1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly. (2) During or after adverse climatic conditions, the Contractor shall: <ol style="list-style-type: none"> (a) Stop work at heights if there is any danger of falling; (b) Stop work if there is a possibility of that such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly; (c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>], inform the Engineer accordingly and request his instructions; and (d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor's Equipment and Temporary Works only after making the necessary repairs. <p>2.7.3. Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prohibit entry in accordance with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations: <ol style="list-style-type: none"> (a) Places where Landslides could be anticipated; (b) Places where there is a risk of flow of material and equipment and soil runoff; and (c) Places where there is a risk of damage due to flash floods, lake or river flooding. (2) Take measures such as evacuation of Contractor's Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground. (3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse. <p>2.7.4. Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prevent collapse, overturn or movement of Contractor's Equipment particularly cranes and pile drivers. 	<p>2.7.2. Preventive Measures</p> <ol style="list-style-type: none"> (1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly. (2) During or after adverse climatic conditions, the Contractor shall: <ol style="list-style-type: none"> (a) Stop work at heights if there is any danger of falling; (b) Stop work if there is a possibility of that such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly; (c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>], inform the Engineer accordingly and request his instructions; and (d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor's Equipment and Temporary Works only after making the necessary repairs. <p>2.7.3. Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prohibit entry in accordance with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations: <ol style="list-style-type: none"> (a) Places where Landslides could be anticipated; (b) Places where there is a risk of flow of material and equipment and soil runoff; and (c) Places where there is a risk of damage due to flash floods, lake or river flooding. (2) Take measures such as evacuation of Contractor's Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground. (3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse. <p>2.7.4. Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prevent collapse, overturn or movement of Contractor's Equipment particularly cranes and pile drivers. 	<p>2.7.2. Preventive Measures</p> <ol style="list-style-type: none"> (1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly. (2) During or after adverse climatic conditions, the Contractor shall: <ol style="list-style-type: none"> (a) Stop work at heights if there is any danger of falling; (b) Stop work if there is a possibility of that such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly; (c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>], inform the Engineer accordingly and request his instructions; and (d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor's Equipment and Temporary Works only after making the necessary repairs. <p>2.7.3. Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prohibit entry in accordance with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations: <ol style="list-style-type: none"> (a) Places where Landslides could be anticipated; (b) Places where there is a risk of flow of material and equipment and soil runoff; and (c) Places where there is a risk of damage due to flash floods, lake or river flooding. (2) Take measures such as evacuation of Contractor's Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground. (3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse. <p>2.7.4. Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prevent collapse, overturn or movement of Contractor's Equipment particularly cranes and pile drivers.
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<p>(2) Always store and/or if necessary evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury.</p> <p>(3) Take the following measures for scaffolding and working platforms.</p> <p>(a) Remove or furl mesh sheets to reduce wind load;</p> <p>(b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors;</p> <p>(c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and</p> <p>(d) Securing Goods on scaffolding, or lowering them to ground level.</p> <p>(4) Discontinue work at in elevated places; and</p> <p>(5) Take measures to prevent scattering of Goods, waste and debris.</p> <p>2.7.5. Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways.</p> <p>(2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like.</p> <p>(3) Remove snow from roofs, canopies and signs, notice boards.</p> <p>(4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal.</p> <p>2.7.6. Measures for Lightning</p> <p>(1) When thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(2) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p> <p>2.7.7. Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event or earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p> <p>2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <p>(1) Perform a visual inspection as specified in JSSS 7.1.3 [Inspection and Monitoring]</p> <p>(2) Check all measured values of any instruments to ensure the safety of TW. When abnormality is found in instruments, recalibrate and or replace them as necessary.</p>	<p>(2) Always store and/or if necessary evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury.</p> <p>(3) Take the following measures for scaffolding and working platforms.</p> <p>(a) Remove or furl mesh sheets to reduce wind load;</p> <p>(b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors;</p> <p>(c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and</p> <p>(d) Securing Goods on scaffolding, or lowering them to ground level.</p> <p>(4) Discontinue work at in elevated places; and</p> <p>(5) Take measures to prevent scattering of Goods, waste and debris.</p> <p>2.7.5. Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways.</p> <p>(2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like.</p> <p>(3) Remove snow from roofs, canopies and signs, notice boards.</p> <p>(4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal.</p> <p>2.7.6. Measures for Lightning</p> <p>(1) When thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(2) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p> <p>2.7.7. Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event or earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p> <p>2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <p>(1) Perform a visual inspection as specified in JSSS 7.1.3 [Inspection and Monitoring]</p> <p>(2) Check all measured values of any instruments to ensure the safety of TW. When abnormality is found in instruments, recalibrate and or replace them as necessary.</p>	<p>(2) Always store and/or if necessary evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury.</p> <p>(3) Take the following measures for scaffolding and working platforms.</p> <p>(a) Remove or furl mesh sheets to reduce wind load;</p> <p>(b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors;</p> <p>(c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and</p> <p>(d) Securing Goods on scaffolding, or lowering them to ground level.</p> <p>(4) Discontinue work at in elevated places; and</p> <p>(5) Take measures to prevent scattering of Goods, waste and debris.</p> <p>2.7.5. Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways.</p> <p>(2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like.</p> <p>(3) Remove snow from roofs, canopies and signs, notice boards.</p> <p>(4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal.</p> <p>2.7.6. Measures for Lightning</p> <p>(1) When thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(2) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p> <p>2.7.7. Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event or earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p> <p>2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <p>(1) Perform a visual inspection as specified in JSSS 7.1.3 [Inspection and Monitoring]</p> <p>(2) Check all measured values of any instruments to ensure the safety of TW. When abnormality is found in instruments, recalibrate and or replace them as necessary.</p>
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<p>(3) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary.</p> <p>(4) Keep the Engineer informed of inspection and monitoring results of TW.</p>	<p>(3) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary.</p> <p>(4) Keep the Engineer informed of inspection and monitoring results of TW.</p>	<p>(3) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary.</p> <p>(4) Keep the Engineer informed of inspection and monitoring results of TW.</p>
<p>2.8 FIRE PREVENTION</p> <p>2.8.1. General</p> <p>The Contractor shall provide the fire preventive measures described in this Section.</p> <p>2.8.2. Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required in the Contract) , temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as "temporary facilities" in this Section).</p> <p>For this purpose, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prepare a firefighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan. (2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire. (3) Prepare a firefighting training plan as a part of the firefighting plan. (4) Carry out all training and keep records of such training in accordance with JSSS 1.17.5 [Records of Education and Training]. <p>2.8.3. Measures of Fire Prevention and Firefighting</p> <p>For fire prevention and firefighting in the temporary facilities, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking areas. (2) Provide fire extinguishers and if necessary fire hydrants with temporary water supply. (3) Different types of fire extinguishers shall be provided according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like. (4) Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer. (5) Train Contractor's Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available) otherwise provide the services required by JSSS 1.22 [Fire Prevention]. <p>2.8.4. Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p>	<p>2.8 FIRE PREVENTION</p> <p>2.8.1. General</p> <p>The Contractor shall provide the fire preventive measures described in this Section.</p> <p>2.8.2. Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required in the Contract) , temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as "temporary facilities" in this Section).</p> <p>For this purpose, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prepare a firefighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan. (2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire. (3) Prepare a firefighting training plan as a part of the firefighting plan. 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(5) Train Contractor's Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available) otherwise provide the services required by JSSS 1.22 [Fire Prevention]. <p>2.8.4. Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p>	<p>2.8 FIRE PREVENTION</p> <p>2.8.1. General</p> <p>The Contractor shall provide the fire preventive measures described in this Section.</p> <p>2.8.2. Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required in the Contract) , temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as "temporary facilities" in this Section).</p> <p>For this purpose, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prepare a firefighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan. (2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire. (3) Prepare a firefighting training plan as a part of the firefighting plan. (4) Carry out all training and keep records of such training in accordance with JSSS 1.17.5 [Records of Education and Training]. <p>2.8.3. Measures of Fire Prevention and Firefighting</p> <p>For fire prevention and firefighting in the temporary facilities, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking areas. (2) Provide fire extinguishers and if necessary fire hydrants with temporary water supply. (3) Different types of fire extinguishers shall be provided according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like. (4) Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer. (5) Train Contractor's Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available) otherwise provide the services required by JSSS 1.22 [Fire Prevention]. <p>2.8.4. Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p>

<p>(1) Creating an evacuation route map if necessary and post this in easy-to-see places.</p> <p>(2) Display the evacuation route as necessary at the work places.</p> <p>(3) Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work.</p> <p>(4) Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire.</p> <p>2.8.5. Management of Flammable and Combustible Materials</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures referring to comply with the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as "flammable and combustible materials" in this Section).</p> <p>In addition, the Contractor shall:</p> <p>(1) Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer.</p> <p>(2) Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight,</p> <p>(3) Take measures to prohibit entry to non-authorized personnel and display signage prohibiting the use of flame.</p> <p>(4) Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor's Personnel.</p> <p>(5) Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials.</p> <p>2.8.6. Additional Service Requirement</p> <p>Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, and if so specified in the Particular Safety Specification, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor's Personnel and Employer's Personnel, to compensate for any such lack of available public services or facilities.</p>	<p>(1) Creating an evacuation route map if necessary and post this in easy-to-see places.</p> <p>(2) Display the evacuation route as necessary at the work places.</p> <p>(3) Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work.</p> <p>(4) Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire.</p> <p>2.8.5. Management of Flammable and Combustible Materials</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures referring to comply with the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as "flammable and combustible materials" in this Section).</p> <p>In addition, the Contractor shall:</p> <p>(1) Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer.</p> <p>(2) Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight,</p> <p>(3) Take measures to prohibit entry to non-authorized personnel and display signage prohibiting the use of flame.</p> <p>(4) Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor's Personnel.</p> <p>(5) Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials.</p> <p>2.8.6. Additional Service Requirement</p> <p>Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, and if so specified in the Particular Safety Specification, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor's Personnel and Employer's Personnel, to compensate for any such lack of available public services or facilities.</p>	<p>(1) Creating an evacuation route map if necessary and post this in easy-to-see places.</p> <p>(2) Display the evacuation route as necessary at the work places.</p> <p>(3) Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work.</p> <p>(4) Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire.</p> <p>2.8.6. Management of Flammable and Combustible Materials</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures referring to comply with the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as "flammable and combustible materials" in this Section).</p> <p>In addition, the Contractor shall:</p> <p>(1) Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer.</p> <p>(2) Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight,</p> <p>(3) Take measures to prohibit entry to non-authorized personnel and display signage prohibiting the use of flame.</p> <p>(4) Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor's Personnel.</p> <p>(5) Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials.</p> <p>2.8.6. Additional Service Requirement</p> <p>Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, and if so specified in the Particular Safety Specification, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor's Personnel and Employer's Personnel, to compensate for any such lack of available public services or facilities.</p>
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<p>(1) Such additional facilities may include sufficient temporary water and power supply to maintain emergency use.</p> <p>(2) Enhanced fire protection equipment and facilities around the Site.</p> <p>2.8.7. Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>The Contractor shall refer to and comply with JSSS 7.8 [Electric and Gas Welding and Cutting] for the fire prevention requirements for electric and gas welding and cutting works.</p>	<p>(1) Such additional facilities may include sufficient temporary water and power supply to maintain emergency use.</p> <p>(2) Enhanced fire protection equipment and facilities around the Site.</p> <p>2.8.7. Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>The Contractor shall refer to and comply with JSSS 7.8 [Electric and Gas Welding and Cutting] for the fire prevention requirements for electric and gas welding and cutting works.</p>	<p>(1) Such additional facilities may include sufficient temporary water and power supply to maintain emergency use.</p> <p>(2) Enhanced fire protection equipment and facilities around the Site.</p> <p>2.8.7. Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>The Contractor shall refer to and comply with JSSS 7.8 [Electric and Gas Welding and Cutting] for the fire prevention requirements for electric and gas welding and cutting works.</p>
<p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT</p> <p>2.9.1. Personal Protective Equipment (PPE)</p> <p>(1) General</p> <p>(a) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(b) PPE shall comply with the additional requirements of this Section.</p> <p>(c) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(i) Head Protection;</p> <p>(ii) Protective Footwear; and</p> <p>(iii) Work Clothing</p> <p>(d) The following additional PPE shall be provided whenever required by the working environment:</p> <p>(i) Eye and Face Protection;</p> <p>(ii) Ear Protection</p> <p>(iii) Respiratory Protection</p> <p>(iv) PPE for PFRS and PFAS (Safety Belts, Full body harnesses, and others)</p> <p>(v) Gloves</p> <p>(vi) Work Clothing</p> <p>(e) First-aid Kits and First-Aid Equipment must always be provided.</p> <p>(f) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.</p>	<p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT</p> <p>2.9.1. Personal Protective Equipment (PPE)</p> <p>(1) General</p> <p>(a) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(b) PPE shall comply with the additional requirements of this Section.</p> <p>(c) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(iv) Head Protection;</p> <p>(v) Protective Footwear; and</p> <p>(vi) Work Clothing</p> <p>(d) The following additional PPE shall be provided whenever required by the working environment:</p> <p>(i) Eye and Face Protection;</p> <p>(ii) Ear Protection</p> <p>(iii) Respiratory Protection</p> <p>(iv) PPE for PFRS and PFAS (Safety Belts, Full body harnesses, and others)</p> <p>(v) Gloves</p> <p>(vi) Work Clothing</p> <p>JC13: 2.6.1(d)及び2.9.2(9):PPEから作業服に関する記述を削除しています。いろいろと議論はあったところですが、やはり「コントラクターが支給する」ということをデフォルトにするのはやりすぎのように思います。</p> <p>2.6.1(d) and 2.9.2(9): The requirements regarding working clothes are deleted. Though there is various discussion, it is excessive to specify as default for the Contractor to provide workers working clothes.</p> <p>NK : 作業服に替えて、OSHA で規定している次の PPE を規定し、その中に作業服に代えて body protection を規定することを提案します。</p>	<p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT</p> <p>2.9.1. Personal Protective Equipment (PPE)</p> <p>(1) General</p> <p>(a) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(b) PPE shall comply with the additional requirements of this Section.</p> <p>(c) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(i) Head Protection;</p> <p>(ii) Protective Footwear; and</p> <p>(d) The following additional PPE shall be provided whenever required by the working environment:</p> <p>(i) Eye and Face Protection;</p> <p>(ii) Ear Protection</p> <p>(iii) Respiratory Protection</p> <p>(iv) PPE for PFRS and PFAS (Safety Belts, Full body harnesses, and others)</p> <p>(v) Gloves</p> <p>(vi) Body Protection</p>

(2) Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against from electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

	Standard	Title of Standard
1	JIS T8131	Industrial Safety Helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial Safety Helmets

(3) Protective Footwear

Protective footwear shall protect against foot injury due to crushing by superimposed loads, impact injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers' from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, **electrically insulating** or thermally insulating, appropriate footwear shall be selected for the risks identified.

NK propose to specify body protection for working clothing referring to the following OSHA guide and reference clause:

OSHA defines Personal Protective Equipment is equipment worn to minimize exposure to a variety of hazards. Examples of personal protective equipment generally fall into the following categories:

- Eye and Face Protection.
- Head Protection.
- Leg and Foot Protection.
- Hand and Arm Protection.
- Hearing Protection.
- Body Protection.
- Respirators.

§ 1926.57 Ventilation. (f) Abrasive blasting (2) Dust hazards from abrasive blasting. (v) Operators shall be equipped with heavy canvas or leather gloves and aprons or equivalent protection to protect them from the impact of abrasives. Safety shoes shall be worn to protect against foot injury where heavy pieces of work are handled.

(c) ~~First-aid Kits and First Aid Equipment must always be provided.~~

(f) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.

NK: Following the comment to (6) Respiratory Protection, the maintenance of PPE is additionally specified in (e).

NK: (e) First-aid Kits is moved to 2.9.2 (1) because 2.9.1 is for PPE.

(2) Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against from electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

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Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, **electrically insulating** or thermally insulating, appropriate footwear shall be selected for the risks identified.

(e) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.

(f) Maintenance of all PPE shall be made, except for disposable (single use) PPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month or as specified in the Safety Plan or in accordance with the manufacturer's instructions. However, if the PPE is used only occasionally, an examination and test should be carried out before use and, in any event, the interval should not exceed three months or as specified in the Safety Plan or in accordance with the manufacturer's instructions.

(2) Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against from electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

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Protective footwear shall protect against foot injury due to crushing by superimposed loads, impact injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers' from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, electrically insulating or thermally insulating, appropriate footwear shall be selected for the risks identified.

Protective footwear shall ensure a level of performance that is equal to or

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20346 BS EN ISO 20349	Personal protective equipment - Protective footwear Personal protective equipment. Footwear protecting against risks in foundries and welding

(4) Eye and Face Protection

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

	Standard	Title of Standard
1	JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
2	ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
3	BS EN 166 BS EN ISO 4007	Personal eye protection. Specifications Personal protective equipment. Eye and face protection. Vocabulary

(5) Ear Protection

Ear protection shall protect workers' hearing against injury from continuous, loud or Intense Noise by providing soundproofing.

The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

	Standard	Title of Standard
1	JIS T 8161	Ear protectors
2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20346 BS EN ISO 20349	Personal protective equipment - Protective footwear Personal protective equipment. Footwear protecting against risks in foundries and welding

(4) Eye and Face Protection

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

	Standard	Title of Standard
1	JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
2	ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
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Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

	Standard	Title of Standard
1	JIS T 8161	Ear protectors
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greater than the following standards.

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20346 BS EN ISO 20349	Personal protective equipment - Protective footwear Personal protective equipment. Footwear protecting against risks in foundries and welding

(4) Eye and Face Protection

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

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Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

	Standard	Title of Standard
1	JIS T 8161	Ear protectors
2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors

3	BS EN ISO 4869-1	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation
	BS EN ISO 4869-2	Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn
	BS EN ISO 4869-3	Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture
	BS EN ISO 4869-4	Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs

3	BS EN ISO 4869-1	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation
	BS EN ISO 4869-2	Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn
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	BS EN ISO 4869-4	Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs

(6) Respiratory Protection

Respiratory protection shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

Respiratory protection equipment (RPE) shall fit properly to worker's face and be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.

When replacing them or any other part, check with the manufacturer's guidance and ensure the correct replacement part is used.

Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.

Maintenance is a requirement for all RPE, except for disposable (single use) RPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month. However, if the RPE is used only occasionally, an examination and test should be carried out before use and, in any event, the interval should not exceed three months. Emergency escape-type RPE should be examined and tested in accordance with the manufacturer's instructions.

In addition to the requirements above, the Contractor shall select, use and maintain RPE referring to Respiratory protective equipment at work, practical guide, HSG53 (Fourth edition, published 2013).

Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: Table of PPE for Respiratory Protection

	Standard	Title of Standard
1	JIS T 8151 JIS T 8157	Particulate respirator Powered air purifying respirator
2	↔ BS EN 149: 2001+A1: 2009	↔ Respiratory protective devices. Filtering half masks to protect against

(6) Respiratory Protection

Respiratory protection shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

Respiratory protection equipment (RPE) shall fit properly to worker's face and be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.

When replacing them or any other part, check with the manufacturer's guidance and ensure the correct replacement part is used.

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JC15: 2.9.1(6) 上の文章は PPE の全体にかかるものではないでしょうか。2.9.1(1)に移すべきではないでしょうか。
2.9.1(6): The above seems to cover whole PPE. Therefore, they should be moved to 2.9.1(1).

NK: moved to 2.9.1 (1) (f) as general requirement and the above is modified as right.

In addition to the requirements above, the Contractor shall select, use and maintain RPE referring to Respiratory protective equipment at work, practical guide, HSG53 (Fourth edition, published 2013).

Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: Table of PPE for Respiratory Protection

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When replacing them or any other part, check with the manufacturer's guidance and ensure the correct replacement part is used.

Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.

In addition to JSSS 2.9.1 (1) (f), maintenance for emergency escape-type RPE should be examined and tested in accordance with the manufacturer's instructions.

In addition to the requirements above, the Contractor shall select, use and maintain RPE referring to Respiratory protective equipment at work, practical guide, HSG53 (Fourth edition, published 2013).

Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: Table of PPE for Respiratory Protection

	Standard	Title of Standard
1	JIS T 8151 JIS T 8157	Particulate respirator Powered air purifying respirator
2	↔ BS EN 149: 2001+A1: 2009	↔ Respiratory protective devices. Filtering half masks to protect against particles.

	2) BS EN 14593-1: 2018	particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

(7) Safety Harnesses and Belts

Safety belts PPE for PFRS shall prevent the risk of workers falling from a height or sliding down slopes. PPE for PFAS shall arrest a worker in a fall from a height or sliding down slopes.

For further requirement on PPE for fall prevention, PFRS and PFAS refer to JSSS エラー! 参照元が見つかりません。 [Personal Protective Equipment for Fall Prevention].

PPE for PFRS and PFAS Safety belts shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for Safety Belts PPE for PFRS and PFAS

	Standard	Title of Standard
1	JIS T8165	Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN_361 BS EN 358	Personal protective equipment against falls from a height. Full body harnesses Personal protective equipment for work positioning and prevention of falls from a height. Belts and lanyards for work positioning or restraint

(8) Gloves

Gloves shall protect workers' hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers' hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for Gloves

	2) BS EN 14593-1: 2018	particles. 2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

(7) Safety Harnesses and Belts

Safety belts PPE for PFRS shall prevent the risk of workers falling from a height or sliding down slopes. PPE for PFAS shall arrest a worker in a fall from a height or sliding down slopes.

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3	BS EN_361 BS EN 358	Personal protective equipment against falls from a height. Full body harnesses Personal protective equipment for work positioning and prevention of falls from a height. Belts and lanyards for work positioning or restraint

JC14: またこれは総則の定義にもさかのぼる全般の話なのですが、デフォルトで使用することを想定している harness が普通名詞で、一般には使用が制限される方向にある胴ベルトが Safety Belt として大文字の定義語になっているのが少し気になります。但し、これは全体を整理する中で再検討すればよいと思います。

The term of harness which is specified to be used for PPE as default is not defined as "Harness", on the other hand that of "safety belt" which is specified as limited use is defined as "Safety Belt" in Chapter 1. These terms seem a little strange. Definitions of terms will be discussed when reviewing whole contents of JSSS.

NK: Chapter 1 (issue 7) has included "Harness". The definition of terms will be discussed after all JSSS is completed.

(8) Gloves

Gloves shall protect workers' hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers' hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

	2) BS EN 14593-1: 2018	2) Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

(7) Safety Harnesses and Belts

Safety belts PPE for PFRS shall prevent the risk of workers falling from a height or sliding down slopes. PPE for PFAS shall arrest a worker in a fall from a height or sliding down slopes.

For further requirement on PPE for fall prevention, PFRS and PFAS refer to JSSS エラー! 参照元が見つかりません。 [Personal Protective Equipment for Fall Prevention].

PPE for PFRS and PFAS Safety belts shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for Safety Belts PPE for PFRS and PFAS

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3	BS EN_361 BS EN 358	Personal protective equipment against falls from a height. Full body harnesses Personal protective equipment for work positioning and prevention of falls from a height. Belts and lanyards for work positioning or restraint

(8) Gloves

Gloves shall protect workers' hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers' hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

	Standard	Title of Standard
1	JIS T 8112 JIS T 8113 JIS T 8114	Gloves of insulating material used for electrical working (Japanese only) Protective Leather Gloves for Welders Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (a nationally adopted international standard) (too long)
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8112 JIS T 8113 JIS T 8114	Gloves of insulating material used for electrical working (Japanese only) Protective Leather Gloves for Welders Vibration isolation gloves
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3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

(9) Work Clothing

Contractor's Personnel ~~All personnel~~ shall be supplied with and shall wear suitable protective work clothing required by the working environment appropriate for their work tasks. ~~In general, all personnel shall be provided with overalls.~~

~~Further~~ risks such as from chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, entanglement of own clothing, heat, cold, etc. shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame-retardant, anti-static, chain mail, chemically impermeable, and high-visibility clothing and the like.

Work clothing shall be selected and provided for the risks to be identified.

Work clothing shall be kept reasonably clean and shall be replaced when worn out or damaged.

(9) Work Clothing

Contractor's Personnel All personnel shall be supplied with and shall wear suitable protective work clothing required by the working environment appropriate for their work tasks. In general, all personnel shall be provided with overalls.

Further risks such as from chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, entanglement of own clothing, heat, cold, etc. shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame retardant, anti static, chain mail, chemically impermeable, and high visibility clothing and the like.

Work clothing shall be selected and provided for the risks to be identified.

Work clothing shall be kept reasonably clean and shall be replaced when worn out or damaged.

JC13: same comments to 2.9.1 (1) (d) and deleted (9).

NK as proposed in 2.9.1 (1) (d) and replaced the above (9) Work Clothing with (9) Body Protection as right.

(9) Body Protection

Body protection shall protect workers' body against injury from cuts, radiation, extreme temperatures, hot splashes, impacts from tools, machinery and materials, hazardous chemicals, etc..

PPE that provides body protection are for example laboratory coats, coveralls, vests, jackets, aprons, full body suits.

Appropriate PPE for body protection shall be selected based on the hazard assessment and tasks associated.

2.9.2. First-aid Kits

(1) General

By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid" of "Part 1910 - Occupational Safety and Health Standards" and as follows.

The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.

All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the first aid kit(s).

2.9.2. First-aid Kits

(1) General

NK: 2.9.1(1)(e) First-aid Kits is moved to 2.9.2(1) because 2.9.1 is for PPE.

By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid" of "Part 1910 - Occupational Safety and Health Standards" and as follows.

The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.

2.9.2. First-aid Kits

(1) General

The Contractor shall always provide First-aid Kits and First-Aid Equipment at the Site.

By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid" of "Part 1910 - Occupational Safety and Health Standards" and as follows.

The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.

All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the first aid kit(s).

(2) First-Aid Kit

Each first-aid kit should contain at least the following items, specifications and quantities listed in ANSI Z308.1-2015 according to the work:

- (a) Adhesive Bandage
- (b) Adhesive Tape
- (c) Antibiotic Application
- (d) Antiseptic
- (e) Breathing Barrier
- (f) Burn Dressing (gel soaked)
- (g) Burn Treatment
- (h) Cold Pack
- (i) Eye Covering, with means of attachment
- (j) Eye/Skin Wash
- (k) First Aid Guide
- (l) Hand Sanitizer
- (m) Medical Exam Gloves
- (n) Roller Bandage
- (o) Scissors
- (p) Splint
- (q) Sterile pad
- (r) Tourniquet
- (s) Trauma pad
- (t) Triangular Bandage

To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, Cardiopulmonary Resuscitation (CPR) breathing barriers, eye protection and like supplies.

(3) Automated External Defibrillator (AED)

Unless otherwise stated in the ~~bidding Documents~~ Contract and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.

The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.

All personnel at the site need to be aware of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.

Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.

AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	BS EN 60601-2-4:2011+A1:2019	Medical electrical equipment. Particular requirements for the basic safety and essential performance of cardiac defibrillators

All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the first aid kit(s).

(2) First-Aid Kit

Each first-aid kit should contain at least the following items, specifications and quantities listed in ANSI Z308.1-2015 according to the work:

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- (g) Burn Treatment
- (h) Cold Pack
- (i) Eye Covering, with means of attachment
- (j) Eye/Skin Wash
- (k) First Aid Guide
- (l) Hand Sanitizer
- (m) Medical Exam Gloves
- (n) Roller Bandage
- (o) Scissors
- (p) Splint
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- (i) Eye Covering, with means of attachment
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All personnel at the site need to be aware of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.

Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.

AED shall ensure a level of performance that is equal to or greater than the following standards.

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**JICA Standard Safety Specification Preparation Study
CHAPTER 2: GENERAL SAFETY MEASURES (English DFR R0)**

2019.9.3 Japanese Final
2019.11.19 NK Issue 2
2019.12.17 JICA Comments
2020.3.4NK R2
2020.3.6 JICA Comments
2020.3.12 NK R3
2020.3.18 NK Issue3
2020.6.2 FDR-R0

JICA Comments on R2(2020/3/6) JC: JICA Comments in blue letters on sentence underlined NK: NK actions	JSSS in English R3 for Issue 3 (2020/3/12) Blue letters: JICA revised on the draft	JSSS in English Issue 3 (2020/3/18) With comments by MD	JSSS in English FDR R0 (Finalized Issue 3 2020/3/18 for FDR Clean Copy) Red letters: Revise by NK 2020.6.2
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<p>JC: e-mail from Mr. Ito on 2020/3/10</p> <p>1. 標記の件、下記の通りコメントします。特に PFAS や PFRS の理解に混乱が見られるように思えます。</p> <p>We hereunder comment regarding Chapter 2 as follows. Specially there seems confusion between PFAS and PFRS.</p> <p>2. なお、全体が提出された際に、今回コメントしていない部分にコメントする可能性があることは、先ほどお送りしたメールにある通りです。</p> <p>As we mentioned in the last e-mail, please keep in mind that there is a possibility to make our comments to items which are not commented this time.</p> <p>3. 2.1.1 (2) :こちらのコメントの仕方も悪かったですが、記載通りだと HSE に掲載されている全てのガス・粉じん等に対する規制を遵守しなければならない、という意味にも取られかねないので修正しています。</p> <p>2.2.1 (2): Though it seems our comments may be not properly expressed, the last description in NK draft R2 may be understood as the Contractor shall comply with values</p>			

<p>of all dusts, gases, etc. in the table of HSE. It is not JICA's intention, therefore revision is made as shown here.</p> <p>4. 2.2.2: Secure Working Area Perimeter とこちらからお願いしたものが Secure Site Perimeter となっておりますが、Working Area に戻しています。御社の説明に「Secure Working Area Perimeter is specified in JSSS 2.3」という記述がありますが、2.3 には Dangerous Work に関連することに限定した記述となっており、一般的な記述ではありません。</p> <p>2.2.2: JC requested to change to 2.2.2: Secure Working Area Perimeter but NK draft is still Secure Site Perimeter therefore JC changed again to Working Area. NK explanation is that Secure Working Area Perimeter is specified in JSSS 2.3. The 2.3 specifies regarding only Dangerous Work but not general requirements.</p> <p>5. 2.2.3(1) (e)(f): 削除しています。理由は既に前回付してある JICA コメント通りです。(d)の記述は夜間等の non-working hours にも適用されるはずです。</p> <p>2.2.3(1) (e)(f): JC deleted. The reason is as commented. The requirements of (d) apply to the non-working hours including night time.</p> <p>6. 2.5.1(2): 御社の説明の意図に沿った内容にするならば、for use of personnel who engage in....とした方が良いと思われ、そのように修正しています。但し、この条項が本当にこの場所に置いておくことがふさわしいか否かは再検討願います。</p> <p>2.5.1(2): JC considers it is better to revise it to “for use of personnel who engage in...” to specify the same content as the intention in NK's explanation. Please reconsider where is proper location to specify this clause.</p> <p>7. 2.5.11(1)(a)にある Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; という部分は修正が必要だと考えます。親綱に結び付けるのは PFRS ではなく、身体保持器具なのではないでしょうか？添付の図を参照してください。</p> <p>2.5.11(1)(a): JC considers that it needs to correct “Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached”. The good to connect to working lines is not the PFRS but positioning device. Please refer to the attached figure.</p> <p>8. 2.5.11(2)(e): 記述がおかしいように思えます(「ハーネスをハーネスにつける?」)。修正を検討して下さい。ロープ高所作業におけるハーネス(添付の図は古いので胴ベルトですが)は親綱につけるのではないのでしょうか？</p> <p>2.5.13(1)(b)にある PPE for という言葉は不要です。むしろここでは PPP(E)としての PFRS を論じています。</p> <p>2.5.11(2)(e): The description is strange “harness is attached to harness”. Please consider correcting it. In rope work, harness should be connected with working lines. “PPE for” is not necessary in 2.5.13(1)(b). Here, PFRS is discussed as PPE.</p> <p>9. 2.5.13(1)(a) に opening という言葉を加えています</p>			
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<p>(2.5.9(1)の記述(端、開口部からの墜落防止の措置を取らなければならない、とするもの)の趣旨に合致すると思います。</p> <p>2.5.13(1)(a): “opening” is added to meet the requirement that fall prevention measures shall be taken at the edge and opening specified in 2.5.9(1).</p> <p>10. 2.6.4(2): in addition よりも In such a case の方がふさわしいと思われ、その旨修正しています。</p> <p>2.6.4(2): It is revised because JC considers “In such a case” is more suitable than “in addition”.</p> <p>11. 2.7.1(2): 悪天候に関する記述ですが、「foreseeable で EOT 等につながるものではない」と言い切ることは不適當です。修正しています。</p> <p>2.7.1(2): It is inappropriate to affirm “they shall not be construed as constituting a cause of delay giving any entitlement to extension of time under GC”. Revision is made.</p> <p>12. 2.9.1(6): 付け加えられた「Maintenance is a requirement for all RPE, except for disposable (single use) RPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month. However, if the RPE is used only occasionally, an examination and test should be carried out before use and, in any event, the interval should not exceed three months. Emergency escape-type RPE should be examined and tested in accordance with the manufacturer’s instructions.」という文章は PPE の全体にかかるものではないでしょうか。2.9.1(1)に移すべきではないでしょうか</p> <p>2.9.1(6): The added phrase “Maintenance is a requirement for all RPE, except for disposable (single use) RPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month. However, if the RPE is used only occasionally, an examination and test should be carried out before use and, in any event, the interval should not exceed three months. Emergency escape-type RPE should be examined and tested in accordance with the manufacturer’s instructions.” seems to cover whole PPE. Therefore, they should be moved to 2.9.1(1).</p> <p>13. 2.6.1(1)(d)及び 2.9.2(9): PPE から作業服に関する記述を削除しています。いろいろと議論はあったところですが、やはり「コントラクターが支給する」ということをデフォルトにするのはやりすぎのように思います。</p> <p>2.6.1(1)(d) and 2.9.2(9): The requirements regarding working clothes are deleted. Though there is various discussion, it is excessive to specify as default for the Contractor to provide workers working clothes.</p> <p>14. またこれは総則の定義にもさかのぼる全般の話なのですが、デフォルトで使用することを想定している harness が普通名詞で、一般には使用が制限される方向にある胴ベルトが Safety Belt として大文字の定義語になっているのが少し気になります。但し、これは全体を整理する中で再検討すればよいと思います。</p>			
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<p>The term of harness which is specified to be used for PPE as default is not defined as “Harness”, on the other hand that of “safety belt” which is specified as limited use is defined as “Safety Belt” in Chapter 1. These terms seem a little strange. Definitions of terms will be discussed when reviewing whole contents of JSSS.</p>			
<p>2 GENERAL SAFETY MEASURES</p> <p>WORK ENVIRONMENT</p> <p>Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances</p> <p>(1) Definitions</p> <p>Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than:</p> <p>(a) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p> <p>(b) 4 mg/m3 (8-hour TWA) of respirable dust. (TWA means Time weighted average.)</p> <p>Some dusts have been assigned specific WELs as referred to in Table 2.1.1 below.</p> <p>(2) Standards of Workplace Exposure Limits (WELs)</p> <p>The Contractor shall comply with EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1. The Contractor shall monitor the dusts specified in the Particular Safety Specifications and take necessary measures so that the short term and long-term exposure limits will not be exceeded.</p> <p>JC: ここで、ガイダンスとして HSE の表を参照するようにしてくだ</p>	<p>2 GENERAL SAFETY MEASURES</p> <p>2.1 WORK ENVIRONMENT</p> <p>Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances</p> <p>(1) Definitions</p> <p>Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than:</p> <p>(a) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p> <p>(b) 4 mg/m3 (8-hour TWA) of respirable dust. (TWA means Time weighted average.)</p> <p>(2) Standards of Workplace Exposure Limits (WELs)</p> <p>The Contractor shall monitor the dusts specified in the Particular Safety Specifications and take necessary measures so that the short term and long-term exposure limits will not be exceeded.</p>	<p>2 GENERAL SAFETY MEASURES</p> <p>2.1 WORK ENVIRONMENT</p> <p>Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1. Hazardous Substances</p> <p>(1) Definitions</p> <p>Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than:</p> <p>(a) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p> <p>(b) 4 mg/m3 (8-hour TWA) of respirable dust.</p> <p><i>There is no need to define TWA here, ALL definitions are consistently included in Annex 1.1:</i></p> <p><i>I have used the following heading “Compliance Standards” intentionally to give a consistent appearance in every Section and Chapter of JSSS. Do you we really need to change this here and everywhere else?</i></p> <p><i>(Also, Workplace Exposure Limits are already defined in Annex 1.1: but this is not now needed if the Table is to be deleted)</i></p> <p>NK: We adopted MD’s proposal. MD 氏の案のままとします。</p> <p>2.1.2. Compliance Standards</p> <p><i>Changed in 2.1.4 therefore for consistency to be changed everywhere;</i></p> <p>(1) By reference to JSSS 1.4 [<i>Compliance with JSSS and Other Regulations</i>], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for work environment complying with the technical requirements specified in EH40/2005</p>	<p>2 GENERAL SAFETY MEASURES</p> <p>2.1 WORK ENVIRONMENT</p> <p>Contractor’s Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.</p> <p>2.1.1 Hazardous Substances</p> <p>(1) Definitions</p> <p>Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [<i>Definitions and Abbreviations</i>]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than:</p> <p>(a) 10 mg/m3 (8-hour TWA) of inhalable dust; or</p> <p>(b) 4 mg/m3 (8-hour TWA) of respirable dust.</p> <p>2.1.2 Compliance Standards</p> <p>(1) By reference to JSSS 1.4 [<i>Compliance with JSSS and Other Regulations</i>], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for work environment complying with the technical requirements specified in EH40/2005 Workplace Exposure Limits, (third edition published 2018), issued by HSE.</p>

<p>さい。</p> <p>Please describe in the User Guide that the Employer shall specify the dusts to be monitored and their short term and long-term WELs selected from the EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1.</p> <p>NK: modified as right and describe above in the User Guide.</p> <p>(3) Asbestos</p>	<p>(3) Asbestos</p>	<p>Workplace Exposure Limits, (third edition published 2018), issued by HSE.</p> <p>(2) The Contractor shall monitor all substances and ensure that the Short Term and Long-Term exposure limits in HSE Table 1 are not exceeded.</p> <p><i>I have deleted the table and amended the clause, which is fine.</i></p> <p><i>However, I do not recommend that the following phrase is included</i></p> <p><i>"The Contractor shall monitor the dusts specified in the Particular Safety Specifications."</i></p> <p><i>It is not the Employer's responsibility to state what is or is not to be monitored, it is the Contractor's responsibility to comply. In trying to be helpful and something is missed, this may then create a problem by reducing the contractor's obligations to monitor and increase the employer's potential liability.</i></p> <p><i>At best, any partial listing, would be a suggestion to help the Contractor which should then be "without prejudice" however this will require such precise wording that I do not recommend it.</i></p> <p><i>Deletion of the Table is unambiguous and clear.</i></p> <p>NK: 基準は遵守し、モニターの対象は請負者が決めるべきとのMD氏の考えが妥当と考えます。 We adopted MD's opinion.</p> <p>(3) Asbestos</p> <p><i>I do not understand why you have chosen to delete any so called "explanations". JSSS is not the same as a technical specification, it is a safety specification which I assumed was intended to improve safety. A major factor in achieving this is, is the promotion of safety awareness, which in some countries, is very necessary.</i></p> <p><i>To raise awareness, such explanations are very helpful if not essential hence their inclusion in OSHA, HSE and JSSS.</i></p> <p><i>This is as important to the Contractor as it is to the Employer and if anything should be in both JSSS and the User Guide.</i></p> <p><i>I had drafted this description so that many inexperienced contractors may become aware that asbestos exists in many forms and he should then be required to take precautions. The Contractor does have obligations anyway and this is also connected with GC 4.12 [Unforeseeable Physical Conditions] and it requires careful handling. I suggest that it is left in and also suggest that careful wording is required to avoid future contract problems.</i></p> <p><i>Your comment (or discussion) on my suggestions here and in the User Guide will be appreciated.</i></p> <p>NK: MD氏は、OSHAやHSEと同様に、JSSSにもこうした「説明」は重要と説明しています。</p>	<p>(2) The Contractor shall monitor all substances and ensure that the Short Term and Long-Term exposure limits in HSE Table 1 are not exceeded.</p> <p>(3) Asbestos</p>
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<p>(a) When required in the Contract, the Contractor shall take measures for asbestos in accordance with the Particular Safety Specification.</p> <p>(b) When existence of asbestos is found in the Works, the Contractor shall report to the Engineer and take measures in accordance with the requirements of JSSS 1.19 [Hazardous Substances], and</p> <p>(c) If so required in the Contract or by an instruction by the Engineer, the Contractor shall comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.</p> <p>(4) Other Hazardous Substances</p> <p>The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of</p>	<p>(a) When required in the Contract, the Contractor shall take measures for asbestos in accordance with the Particular Safety Specification.</p> <p>(b) When existence of asbestos is found in the Works, the Contractor shall report to the Engineer and take measures in accordance with the requirements of JSSS 1.19 [Hazardous Substances], and</p> <p>(c) If so required in the Contract or by an instruction by the Engineer, the Contractor shall comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.</p> <p>(4) Other Hazardous Substances</p> <p>The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of</p>	<p>JICA から、墜落防止の節でも同様の説明は不要とのコメントがあった。墜落と異なり、アスベストの危険性を知らない又は無視する請負者の存在は予想されるため、請負者に注意を促すために、原文を変更して残すことを提案します。</p> <p>We agreed to MD's opinion. JICA commented to delete explanation sentences in Section for Fall prevention. Because there may contractors who don't know risk of asbestos or who ignore asbestos, we propose to stipulate the (a) with modification to make it request to the Contractor instead of awareness sentence.</p> <p>(a) Asbestos causes many construction fatalities every year and the Contractor should be aware that it is -and the Contractor shall be aware that asbestos causes occupational fatalities are commonly found in older buildings frequently in ceiling and floor cavities, insulation, sprayed coatings, floor tiles and composites, asbestos-cement sheets and roofing felt;</p> <p>(b) If the scope of Works requires removal of any of the above materials then the Contractor shall check for asbestos content, then remove and dispose of such materials in compliance with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE.</p> <p>(c) If the Particular Safety Specification specifies that asbestos may exist at the Site and that the Contractor is responsible for the removal and disposal or if it is discovered during the execution of the Work and the Contractor is instructed by the Engineer to remove it, then the Contractor shall take measures in accordance with the requirements of JSSS 1.22 [Dangerous Work]; and comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.</p> <p>(4) Other Hazardous Substances</p> <p>The Contractor shall comply with relevant</p>	<p>(a) Asbestos causes many construction fatalities every year and the Contractor should shall be aware that asbestos causes occupational fatalities are commonly found in older buildings frequently in ceiling and floor cavities, insulation, sprayed coatings, floor tiles and composites, asbestos-cement sheets and roofing felt;</p> <p>(b) If the scope of Works requires removal of any of the above materials then the Contractor shall check for asbestos content, then remove and dispose of such materials in compliance with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE.</p> <p>(c) If the Particular Safety Specification specifies that asbestos may exist at the Site and that the Contractor is responsible for the removal and disposal or if it is discovered during the execution of the Work and the Contractor is instructed by the Engineer to remove it, then the Contractor shall take measures in accordance with the requirements of JSSS 1.22 [Dangerous Work]; and comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.</p> <p>(4) Other Hazardous Substances</p> <p>The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either</p>
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<p>any other Hazardous Substances either existing on the Site or used in the Works.</p> <p>(5) Prevention</p> <p>(a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and</p> <p>(b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowwers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE</p> <p>(a) If it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and</p> <p>(b) For details of PPE refer to JSSS 2.9.1 [Personal Protective Equipment (PPE)].</p>	<p>any other Hazardous Substances either existing on the Site or used in the Works.</p> <p>(5) Prevention</p> <p>(a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and</p> <p>(b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowwers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE</p> <p>(a) If it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and</p> <p>(b) For details of PPE refer to JSSS 2.9.1 [Personal Protective Equipment (PPE)].</p>	<p>HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either existing on the Site, used in or encountered on the Works.</p> <p>(5) Prevention</p> <p>(a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and</p> <p>(b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowwers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE</p> <p>(a) If, in the opinion of the HSO, it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and</p> <p><i>Please can we leave JSSS 2.9 reference as it is (not change it to 2.9.1) because 2.9.1 is General, not Specific and I have usually referred in this way to the subject of the Section/Chapter unless there is a specifically titled sub item.</i></p> <p><i>Also I have already inserted an automatic MS Word cross reference to 2.9.</i></p> <p>NK: We adopted the below as propose.</p> <p>(b) For details of PPE refer to JSSS 2.9.1 [PPE].</p>	<p>existing on the Site, used in or encountered on the Works.</p> <p>(5) Prevention</p> <p>(a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and</p> <p>(b) The Contractor shall provide all necessary Contractor's Equipment and Temporary Works to achieve this including water-bowwers, spraying equipment, extract ventilation and filtration equipment.</p> <p>(6) PPE</p> <p>(a) If, in the opinion of the HSO, it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor's Personnel; and</p> <p>(b) For details of PPE refer to JSSS 2.9.1 [PPE].</p>
<p>2.1.2 Poor Ventilation</p> <p>(1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation.</p> <p>(2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels.</p> <p>(3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9.1 [Personal Protective Equipment (PPE)].</p> <p>(4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and provide additional adequate ventilation.</p>	<p>2.1.2 Poor Ventilation</p> <p>(1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation.</p> <p>(2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels.</p> <p>(3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9.1 [Personal Protective Equipment (PPE)].</p> <p>(4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and provide additional adequate ventilation.</p>	<p>2.1.3. Poor Ventilation</p> <p>(1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation.</p> <p>(2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels.</p> <p>(3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9.1 (8) [Respiratory Protection Equipment (RPE)].</p> <p>(4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and provide additional adequate ventilation.</p>	<p>2.1.3 Poor Ventilation</p> <p>(1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation.</p> <p>(2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels.</p> <p>(3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9.1 (8) [Respiratory Protection Equipment (RPE)].</p> <p>(4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and provide additional adequate ventilation.</p>
<p>2.1.3 Noise</p>	<p>2.1.3 Noise</p>		<p>2.1.4 Noise</p>

(1) Standards

By reference to **JSSS 1.4 [JSSS - Laws and Reference Standards]**, for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart D - Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

(2) Preventive Measures

To prevent noise damage to Contractor's Personnel, which may occur when noise levels exceed 90 dB (referred to as "intense noise" in JSSS), the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls to within the levels of Table D-2. Permissible Noise Exposures of the OSHA Standard referred to above, if at all possible;

Table D-2: Permissible Noise Exposures

Duration per day, hours	Sound level dBA slow response	Duration per day, hours	Sound level dBA slow response
8	90	1½	102
6	92	1	105
4	95	½	110
3	97	¼ or less	115
2	100		

(1) Standards

By reference to **JSSS 1.4 [JSSS - Laws and Reference Standards]**, for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA Subpart D - Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

(2) Preventive Measures

To prevent noise damage to Contractor's Personnel, which may occur when noise levels exceed 90 dB (referred to as "intense noise" in JSSS), the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls to within the levels of Table D-2: Permissible Noise Exposures of the OSHA Standard referred to above, if at all possible;

Table D-2: Permissible Noise Exposures

Duration per day, hours	Sound level dBA slow response	Duration per day, hours	Sound level dBA slow response
8	90	1½	102
6	92	1	105
4	95	½	110
3	97	¼ or less	115
2	100		

2.1.4. Noise

See above note on changing the following heading, it is included as a standard in many locations.

(1) Compliance Standards

Changed in 2.1.4 therefor for consistency to be changed everywhere;

NK: We adopted MD's proposed title..

- (a) By reference to **JSSS 1.4 [Compliance with JSSS and Other Regulations]**, for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for noise exposure and control complying with the technical requirements specified in OSHA Subpart D—Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

- (b) The Contractor shall provide equipment such as, sound level meters, noise dosimeters, or octave band analysers to determine what sound levels exist and whether they are within the levels in Table D-2 or not.

(2) Preventive Measures

Please note that OSHA also specify that ear protection is required at 85 dB 8 hours TWA. Do you require me to edit the following paragraph? Please advise.

NK: No change of the limit of 90 dB because this is discussed when we prepared Japanese version.

To prevent noise damage to Contractor's Personnel, which may occur when noise levels exceed 90 dB (referred to as "intense noise" in JSSS), or if for any reason sound levels cannot be determined as above the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls to within the levels of Table 2.1.1: OSHA Table D-2: Permissible Noise Exposures of the OSHA Standard referred to above, if at all possible;

Table 2.1.1: OSHA Table D-2: Permissible Noise Exposures

Duration per day, hours	Sound level dBA slow response	Duration per day, hours	Sound level dBA slow response
8	90	1½	102
6	92	1	105
4	95	½	110

(1) Compliance Standard

- (a) By reference to JSSS 1.4 [Compliance with JSSS and Other Regulations], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for noise exposure and control complying with the technical requirements specified in OSHA Subpart D—Occupational Health and Environmental Controls §1926.52 Occupational noise exposure.

- (b) The Contractor shall provide equipment such as, sound level meters, noise dosimeters, or octave band analysers to determine what sound levels exist and whether they are within the levels in Table D-2 or not.

(2) Preventive Measures

To prevent noise damage to Contractor's Personnel, which may occur when noise levels exceed 90 dB (referred to as "intense noise" in JSSS), or if for any reason sound levels cannot be determined as above the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls to within the levels of Table 2.1.1: OSHA Table D-2: Permissible Noise Exposures of the OSHA Standard referred to above, if at all possible;

Table 2.1.1: OSHA Table D-2: Permissible Noise Exposures

Duration per day, hours	Sound level dBA slow response	Duration per day, hours	Sound level dBA slow response
8	90	1½	102
6	92	1	105
4	95	½	110
3	97	¼ or less	115
2	100		

(b) If such controls are not possible to reduce sound levels within the levels of Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS (7) [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard;

(c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and

(d) In all cases where the sound levels exceed the values shown in Table D-2, a continuing effective hearing conservation program specified in (3) below shall be implemented.

(3) Hearing Conservation Program

(a) The Contractor shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in order to accurately identify any Contractor's Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8-hour time-weighted average.

(b) The Contractor must monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. The Contractor shall choose the monitoring method that best suits each individual situation.

2.1.4 Further Requirements for Dangerous Work

Further to the requirements of JSSS 1.19 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the

(b) If such controls are not possible to reduce sound levels within the levels of Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS (7) [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard;

(c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and

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(3) Hearing Conservation Program

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2.1.4 Further Requirements for Dangerous Work

Further to the requirements of JSSS 1.19 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the

3	97	¼ or less	115
2	100		

(b) If such controls are not possible or if they fail to reduce sound levels within the levels of OSHA Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS 2.9.1 (7) [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard.

Your alteration of my English is not correct and it changes the meaning. Please clarify for now why it is changed, I have left it as it was

NK: MD's original was as follows:

(b) If such controls are not possible of if they fail to reduce sound levels within the levels...

OSHA state as follows:

If such controls fail to reduce sound levels within the levels of the table

JICA questioned if your sentence is correct. Your sentence has a typo of "of" which shall be "or".

We adopt your sentence used "or" above.

(c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and

(d) In all cases where the sound levels exceed the values shown OSHA Table D-2, a Continuing Effective Hearing Conservation Program specified in (3) below shall be implemented.

(3) Hearing Conservation Program

(a) The Contractor shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in order to accurately identify any Contractor's Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8-hour time TWA.

(b) The Contractor shall monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. The Contractor shall choose the monitoring method that best suits each individual situation.

2.1.5 Further Requirements for Dangerous Work

(b) If such controls are not possible or if they fail to reduce sound levels within the levels of OSHA Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS 2.9.1 (7) [Ear Protection] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard.

(c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and

(d) In all cases where the sound levels exceed the values shown OSHA Table D-2, a Continuing Effective Hearing Conservation Program specified in (3) below shall be implemented.

(3) Hearing Conservation Program

(a) The Contractor shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in order to accurately identify any Contractor's Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8-hour time TWA.

(b) The Contractor shall monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. The Contractor shall choose the monitoring method that best suits each individual situation.

2.1.5 Further Requirements for Dangerous Work

Further to the requirements of JSSS 1.22 [Dangerous Work] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the

<p>presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, and for this purpose the Contractor shall:</p> <ol style="list-style-type: none"> (1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, <u>trade effluent</u> and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work. (2) Safely isolate the supply and flow of any chemical or other potentially harmful materials and gases in the Site during the period of any work and safely reconnect or continue the same after the work is finished. (3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [<i>General Safety Measures</i>]. (4) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [<i>Prohibition of Entry - Dangerous Work</i>]. 	<p>presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, and for this purpose the Contractor shall:</p> <ol style="list-style-type: none"> (1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, trade effluent and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work. (2) Safely isolate the supply and flow of any chemical or other potentially harmful materials and gases in the Site during the period of any work and safely reconnect or continue the same after the work is finished. (3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [<i>General Safety Measures</i>]. (4) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [<i>Prohibition of Entry - Dangerous Work</i>]. 	<p>Further to the requirements of JSSS 1.22 [<i>Dangerous Work</i>] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, and for this purpose the Contractor shall:</p> <ol style="list-style-type: none"> (1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, trade effluent and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work. (2) Safely isolate the supply and flow of any <u>trade effluent</u>, chemical or other potentially harmful and materials, gases and chemicals during the period of any work and safely reconnect or continue same after the work is finished. (3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [<i>General Safety Measures</i>]. (4) For further information on the removal and disposal of Hazardous Substances refer to JSSS 1.22 [<i>Dangerous Work</i>]. (5) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [<i>Prohibition of Entry - Dangerous Work</i>]. 	<p>presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, and for this purpose the Contractor shall:</p> <ol style="list-style-type: none"> (1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, trade effluent and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work. (2) Safely isolate the supply and flow of any trade effluent, chemical or other potentially harmful and materials, gases and chemicals during the period of any work and safely reconnect or continue same after the work is finished. (3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [<i>General Safety Measures</i>]. (4) For further information on the removal and disposal of Hazardous Substances refer to JSSS 1.22 [<i>Dangerous Work</i>]. (5) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [<i>Prohibition of Entry - Dangerous Work</i>].
<p>2.1.5 High and Low Temperatures and Humidity</p> <ol style="list-style-type: none"> (1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by: <ol style="list-style-type: none"> (a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground; (b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working; (c) Where permitted by the Engineer under the hot climate carrying out work during the night when temperatures and humidity are lower; 	<p>2.1.5 High and Low Temperatures and Humidity</p> <ol style="list-style-type: none"> (1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by: <ol style="list-style-type: none"> (a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground; (b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working; (c) Where permitted by the Engineer under the hot climate carrying out work during the night when temperatures and humidity are lower; 	<p>2.1.6 High and Low Temperatures and Humidity</p> <ol style="list-style-type: none"> (1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by: <ol style="list-style-type: none"> (a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground; (b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working; (c) Where permitted by the Engineer <u>in hot climates</u>, carrying out work during the night 	<p>2.1.6 High and Low Temperatures and Humidity</p> <ol style="list-style-type: none"> (1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by: <ol style="list-style-type: none"> (a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground; (b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working; (c) Where permitted by the Engineer in hot climates, carrying out work during the night when temperatures and humidity are lower; (d) Providing drinking water and supplement that allow salt replenishment at the work

<ul style="list-style-type: none"> (d) Providing drinking water and supplement that allow salt replenishment at work place; (e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover; (f) Allowing work breaks and reducing excessive and continuous working times; and (g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold. <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p>	<ul style="list-style-type: none"> (d) Providing drinking water and supplement that allow salt replenishment at work place; (e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover; (f) Allowing work breaks and reducing excessive and continuous working times; and (g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold. <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p>	<p>when temperatures and humidity are lower;</p> <ul style="list-style-type: none"> (d) Providing drinking water and supplement that allow salt replenishment at the work place; (e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover; (f) Allowing work breaks and reducing excessive and continuous working times; and (g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold. <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing and fully equipped to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p>	<p>place;</p> <ul style="list-style-type: none"> (e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover; (f) Allowing work breaks and reducing excessive and continuous working times; and (g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold. <p>(2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.</p> <p>(3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.</p> <p>(4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing to work safely in low temperatures.</p> <p>(5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.</p>
<p>2.1.6 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.29 [Safety Reports].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <ul style="list-style-type: none"> (a) The pre-existent conditions for all periods of Dangerous Work; (b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated; (c) Noise levels at work places that generate 	<p>2.1.6 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.29 [Safety Reports].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <ul style="list-style-type: none"> (a) The pre-existent conditions for all periods of Dangerous Work; (b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated; (c) Noise levels at work places that generate 	<p>2.1.7. Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.32 [Safety Reports].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <ul style="list-style-type: none"> (a) The pre-existent conditions for all periods of Dangerous Work; (b) Dust at work places where excessive dust and waste material such as dirt, rocks, 	<p>2.1.7 Monitoring and Records</p> <p>(1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.</p> <p>(2) The procedure for preparation and submission of such records shall be as stated in JSSS 1.32 [Safety Reports].</p> <p>(3) The Contractor's monitoring and recording shall also cover:</p> <ul style="list-style-type: none"> (a) The pre-existent conditions for all periods of Dangerous Work; (b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated; (c) Noise levels at work places that generate intense noise;

<p>intense noise;</p> <p>(d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.1. [Dangerous Work], JSSS 2.1.4 [Further Requirements for Dangerous Work] and JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>(a) Values of limits of measurement items:</p> <p>(i) Oxygen concentration less than 19.0% and more than 23.5%.</p> <p>(ii) Hydrogen sulphide concentration more than 10 ppm (short-term exposure limit) or 5 ppm (long term exposure limit);</p> <p>(iii) Carbon dioxide concentration more than 15,000 ppm (short-term exposure limit) or 5,000 ppm (long term exposure limit);</p> <p>(iv) Values of limits given in EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1, for the monitoring items specified in the Particular Safety Specification.</p> <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p>	<p>intense noise;</p> <p>(d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.1. [Dangerous Work], JSSS 2.1.4 [Further Requirements for Dangerous Work] and JSSS 2.3 [Prohibition of Entry – Dangerous Work].</p> <p>(a) Values of limits of measurement items:</p> <p>(i) Oxygen concentration less than 19.0% and more than 23.5%.</p> <p>(ii) Hydrogen sulphide concentration more than 10 ppm (short-term exposure limit) or 5 ppm (long term exposure limit);</p> <p>(iii) Carbon dioxide concentration more than 15,000 ppm (short-term exposure limit) or 5,000 ppm (long term exposure limit);</p> <p>(iv) Values of limits given in EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1, for the monitoring items specified in the Particular Safety Specification.</p> <p>(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability</p>	<p>minerals, metals, carbon, cement, etc. is generated;</p> <p>(c) Noise levels at work places that generate intense noise;</p> <p>(d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place, walkways and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p><i>These limits are already included in the table so what is the point of this addition? Please also refer to the notes above, this is the Contractor's obligation anyway and I do not think it is correct to rely upon the Particular Safety Specification in this way.</i></p> <p><i>NK: In the discussion for preparation of Japanese JSSS, we determined to clearly specify most important measurement items to make the Contractor pay attention them though they included in the table separately specified are duplicated.</i></p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.22 [Dangerous Work], JSSS 2.1.5 [Further Requirements for Dangerous Work] and JSSS エラー! 参照元が見つかりません。 [Prohibition of Entry – Dangerous Work].</p> <p>(a) Values of limits of measurement items:</p> <p>(i) Oxygen concentration less than 19.0% and more than 23.5%.</p> <p>(ii) Hydrogen sulphide concentration more than 10 ppm (short-term exposure limit) or 5 ppm (long term exposure limit);</p> <p>(iii) Carbon dioxide concentration more than 15,000 ppm (short-term exposure limit) or 5,000 ppm (long term exposure limit);</p> <p>(iv) Values of limits for other substances given in EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1, for the monitoring items specified in the Particular Safety Specification.</p>	<p>(d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and</p> <p>(e) Illuminance at work place, walkways and passageways.</p> <p>(4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.</p> <p>(5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.22 [Dangerous Work], JSSS 2.1.5 [Further Requirements for Dangerous Work] and JSSS エラー! 参照元が見つかりません。 [Prohibition of Entry – Dangerous Work].</p> <p>(a) Values of limits of measurement items:</p> <p>(i) Oxygen concentration less than 19.0% and more than 23.5%.</p> <p>(ii) Hydrogen sulphide concentration more than 10 ppm (short-term exposure limit) or 5 ppm (long term exposure limit);</p> <p>(iii) Carbon dioxide concentration more than 15,000 ppm (short-term exposure limit) or 5,000 ppm (long term exposure limit);</p> <p>(iv) Values of limits for other substances given in EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1.</p>
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		(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability	(b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability
RISK CONTROL AROUND THE SITE	2.2 RISK CONTROL AROUND THE SITE	2.2 RISK CONTROL AROUND THE SITE	2.2 RISK CONTROL AROUND THE SITE
2.2.1 General	2.2.1 General	2.2.1 General	2.2.1 General
<p>(1) The Contractor is reminded of his obligations under GC 4.8 [<i>Safety Procedures</i>] and GC 4.22 [<i>Security of the Site</i>] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site.</p> <p>(2) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site.</p> <p>(3) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary, request their assistance to remove any trespassers from the Site.</p> <p>(4) Such measures shall include (but are not restricted to) the following requirements of this Section.</p>	<p>(1) The Contractor is reminded of his obligations under GC 4.8 [<i>Safety Procedures</i>] and GC 4.22 [<i>Security of the Site</i>] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site.</p> <p>(2) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site.</p> <p>(3) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary, request their assistance to remove any trespassers from the Site.</p> <p>(4) Such measures shall include (but are not restricted to) the following requirements of this Section.</p>	<p>(1) The Contractor is reminded of his obligations under GC 4.8 [<i>Safety Procedures</i>] and GC 4.22 [<i>Security of the Site</i>] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site.</p> <p>(2) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site.</p> <p>(3) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary, request their assistance to remove any trespassers from the Site.</p> <p>(4) Such measures shall include (but are not restricted to) the following requirements of this Section.</p> <p><i>I suggest adding the following, it is not a requirement of the Contract:</i></p> <p>NK: GC:6.16 Alcoholic Liquor or Drugs stipulated as follows, however it does not specify not allow workers as mentioned in (5), so (5) is added as we know these at the site. The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal thereto by Contractor's Personnel.</p> <p>(5) The Contractor shall also prevent access to the Site by any persons, including Contractor's and Employer's Personnel and any others who are under the influence of drink or drugs and also to prevent alcohol and drugs being brought onto the Site.</p>	<p>(1) The Contractor is reminded of his obligations under GC 4.8 [<i>Safety Procedures</i>] and GC 4.22 [<i>Security of the Site</i>] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site.</p> <p>(2) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site.</p> <p>(3) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary, request their assistance to remove any trespassers from the Site.</p> <p>(4) Such measures shall include (but are not restricted to) the following requirements of this Section.</p> <p>(5) The Contractor shall also prevent access to the Site by any persons, including Contractor's and Employer's Personnel and any others who are under the influence of drink or drugs and also to prevent alcohol and drugs being brought onto the Site.</p>
2.2.2 Secure Site Working Area Perimeter	2.2.2 Secure Working Area Perimeter	2.2.2 Secure Site Perimeter	2.2.2 Secure Working Area Perimeter
		<i>It is suggested that the following heading should be changed to "Secure Working Area Perimeter". This is not really</i>	

<p>The Contractor shall secure the perimeter of the <u>working area</u>Site to prevent access to the Site by unauthorised persons as specified below unless otherwise stated in the Particular Safety Specification.</p> <p>JC: 2.2.2: Secure Working Area Perimeter とこちらからお願いしたものが Secure Site Perimeter となっていますが、Working Area に戻しています。御社の説明に「Secure Working Area Perimeter is specified in JSSS 2.3」という記述がありますが、2.3 には Dangerous Work に関連すること限定した記述となっており、一般的な記述ではありません。</p> <p>2.2.2: JC requested to change to 2.2.2: Secure Working Area Perimeter but NK draft is still Secure Site Perimeter therefore JC changed again to Working Area. NK explanation is that Secure Working Area Perimeter is specified in JSSS 2.3. The 2.3 specifies regarding only Dangerous Work but not general requirements.</p> <p>JSSS 2.3 specifies as follows: 2.3.2. Demarcation and Requirements (1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>NK: Referring to the last JC comments, NK revises as commented. NK considers JC wants to specify fencing in practical way taking into the perimeter of the long rail way projects.</p> <p>JC: 以下同様に必要な部分を修正 Please revise other part as same.</p>	<p>The Contractor shall secure the perimeter of the <u>working area</u> to prevent access to the <u>working area</u> by unauthorised persons as specified below unless otherwise stated in the Particular Safety Specification.</p>	<p>correct. The Contractor has an obligation to secure the perimeter of the Site in accordance with 2.2.1 above and also to secure the boundary of any dangerous work within the Site which is covered by JSSS 2.3.</p> <p>I have also made frequent mention of this for example in 8.2.1 (1) and elsewhere.</p> <p>The Contractor has no obligation to provide a temporary barrier around any other part of the Works while they are in progress.</p> <p>The content of the following clause applies to Site perimeter fencing as referred to in 2.2.2 and not dangerous work area fencing or barriers and if changed it will be misleading.</p> <p>I have not changed, please review.</p> <p>I have tried to consistently change reference to the contract and the like to “Unless otherwise specified in the Particular Safety Specification.”</p> <p>NK: Because JICA want to specify practical way to avoid accident of unauthorized person in the working area where for example there is local people allowed passing in the Site. We follow JICA requests and replace the Site with the working area. (1) (b) “throughout the Time for Completion” is replaced “throughout the works at the working area, until when such fencing is no longer needed,”</p> <p>(1) Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p>	<p>(1) Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p>
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NK: revises as commented.

(1) Fencing

- (a) Enclose the perimeter of the ~~Site~~ working area with secure fencing;
- (b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas;
- (c) Provide secure entry points with lockable gates or barrier; and
- (d) Provide and maintain signs clearly advising/warning against entry.

- (2) ~~Site Working area~~ perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.
- (3) Full details of ~~Site-working are~~ perimeter fencing including scope, dimensions and specifications shall be referred to ~~the Particular Safety Specification.~~

2.2.3 Measures for Road Occupation

- (1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:
 - (a) Prepare a road usage plan and submit it to the engineer and the relevant authorities, and obtain necessary permits, prior to road use;
 - (b) Obtain the approval and necessary permits of the relevant authorities before any road closure, diversion or other traffic restrictions are applied;

(1) Fencing

- (a) Enclose the perimeter of the working area with secure fencing;
- (b) Maintain all such fencing in good condition, throughout the Time for Completion, remove at the time of taking over of the Works and reinstate all affected areas;
- (c) Provide secure entry points with lockable gates or barrier; and
- (d) Provide and maintain signs clearly advising/warning against entry.

- (2) Working area perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion.
- (3) Full details of working area perimeter fencing including scope, dimensions and specifications shall be referred to the Particular Safety Specification.

2.2.3 Measures for Road Occupation

- (1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:
 - (a) Prepare a road usage plan and submit it to the engineer and the relevant authorities, and obtain necessary permits, prior to road use;
 - (b) Obtain the approval and necessary permits of the relevant authorities before any road closure, diversion or other traffic restrictions are applied;

- (a) Enclose the perimeter of the ~~Site~~ working area with secure fencing to prevent access to the Site by unauthorised persons;
- (b) Maintain all such fencing in good condition, throughout the Time for Completion, ~~remove at the time of taking over the Works~~ throughout the works at the working area, until when such fencing is no longer needed, and reinstate all affected areas;
- (c) Provide secure entry points with lockable gates or barrier; and
- (d) Provide and maintain signs clearly advising/warning against entry.

I suggest the following is added in clarification of GC 4.8 " watching.."

NK: We added.

- (e) Provide watchmen and lighting where, when and to the extent necessary to apprehend and evict any unauthorised persons (particularly children) from the Site who may have breached the ~~Site Perimeter Fencing.~~ working area perimeter fencing.

- (2) Unless otherwise specified in the Particular Safety Specification, ~~Site-working area~~ perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the Time for Completion ~~work.~~

- (3) Full details of ~~Site-working area~~ perimeter fencing including scope, dimensions and specifications shall be given in the ~~Particular Safety Specification.~~ Method Statement.

- (4) The Contractor shall provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations outside the ~~Site-working area~~ perimeter.

2.2.3 Measures for Road Occupation

- (1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:
 - (a) Prepare a road usage plan and submit it to the relevant authorities, and obtain necessary permits, prior to road use;
 - (b) Obtain the approval and necessary permits of the relevant authorities before any road closure, diversion or other traffic restrictions

- (a) Enclose the perimeter of the working area with secure fencing to prevent access to the Site by unauthorised persons;
- (b) Maintain all such fencing in good condition, throughout the works at the working area, until when such fencing is no longer needed, and reinstate all affected areas;
- (c) Provide secure entry points with lockable gates or barrier; and
- (d) Provide and maintain signs clearly advising/warning against entry.

- (c) Provide watchmen and lighting where, when and to the extent necessary to apprehend and evict any unauthorised persons (particularly children) from the Site who may have breached the working area perimeter fencing.

- (2) Unless otherwise specified in the Particular Safety Specification, working area perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended and maintained throughout the work.

- (3) Full details of working area perimeter fencing including scope, dimensions and specifications shall be given in the Method Statement.

- (4) The Contractor shall provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations outside the working area perimeter.

2.2.3 Measures for Road Occupation

- (1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:
 - (a) Prepare a road usage plan and submit it to the relevant authorities, and obtain necessary permits, prior to road use;
 - (b) Obtain the approval and necessary permits of the relevant authorities before any road

<p>(c) Take necessary measures to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(e) Remove Contractor's Equipment during non-working periods (e.g. night time and weekends), store safely away from the works, provide temporary covers or barriers, lighting and warning signs, leave the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident;</p> <p>In case the relevant authority approves the Contractor to store Contractor's Equipment safely during non-working periods (e.g. night time and weekends), provide temporary barriers, lighting and warning signs, keep the Site in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident; and</p> <p>JC: 2.2.3(1) (e)(f): 削除しています。理由は既に前回付してある JICA コメント通りです。(d)の記述は夜間等の non-working hours にも適用されるはずです。</p> <p>2.2.3(1) (e)(f): JC deleted. The reason is as commented. The requirements of (d) apply to the non-working hours including night time.</p> <p>NK: deleted as commented.</p> <p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [Spotters and Flagmen]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4 Temporary Road Signs</p> <p>(1) For disseminating necessary information on roads adjacent to the Site, the Contractor shall:</p> <p>(a) Provide standard road signs in the same colours and format as those used by the road authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs;</p>	<p>(c) Take necessary measures to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [Spotters and Flagmen]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4 Temporary Road Signs</p> <p>(1) For disseminating necessary information on roads adjacent to the Site, the Contractor shall:</p> <p>(a) Provide standard road signs in the same colours and format as those used by the road authorities in the Country such as construction signs, direction, speed</p>	<p>are applied;</p> <p>(c) Take necessary measures to limit any restrictions to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>NK: The original phrase is proper than the above. Modified as above.</p> <p>Suggest the following are necessary also:</p> <p>NK: We adopted MD's proposal (d) to (g), but (h) is not because deleted by JICA on 2020/03/06. However, (d) to (g) are specified in 2.2.2 above, so only stipulate to take measures in 2.2.2.</p> <p>(d) Provide temporary fencing or barriers around all working areas;</p> <p>(c) Provide and maintain signs clearly advising/warning against entry.</p> <p>(f) Provide watchmen and lighting where, when and to the extent necessary to apprehend and evict any unauthorised persons (particularly children) from the Site who may have breached the Site Perimeter Fencing.</p> <p>(g) Provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations;</p> <p>(h) Unless otherwise permitted by the relevant authority, remove Contractor's Equipment during non-working periods (e.g. night time and weekends) and store safely away from the Works, provide temporary covers or barriers, lighting and warning signs, leave the working area in an orderly and safe condition and regularly maintain and inspect to remove any risk of accident;</p> <p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [Spotters and Flagmen]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4 Temporary Road Signs</p> <p>(1) For disseminating necessary information on roads adjacent to the Site, the Contractor shall:</p> <p>(a) Provide standard road signs in the same colours and format as those used by the relevant authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs;</p>	<p>closure, diversion or other traffic restrictions are applied;</p> <p>(c) Take necessary measures to ensure safe and smooth traffic flow on the road during the entire road usage period;</p> <p>(d) Take safety measures specified in JSSS 2.2.2 [Secure Working Area Perimeter]</p> <p>(2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to JSSS 2.4 [Spotters and Flagmen]) full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.</p> <p>2.2.4 Temporary Road Signs</p> <p>(1) For disseminating necessary information on roads adjacent to the Site, the Contractor shall:</p> <p>(a) Provide standard road signs in the same colours and format as those used by the relevant authorities in the Country such as construction signs, direction, speed</p>
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<p>(b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(2) Maintain the various signs regularly, including repairing, painting and cleaning, and ensuring that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5 Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect against accident.</p>	<p>restriction, detour and roadwork signs;</p> <p>(b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(2) Maintain the various signs regularly, including repairing, painting and cleaning, and ensuring that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5 Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect against accident.</p>	<p>(b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(2) Maintain the various signs regularly, including repairing, painting and cleaning. Ensure that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5 Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect against accident.</p> <p>Suggest the following are necessary also:</p> <p>NK: Added.</p> <p>(c) Provide designated areas for anyone entering the Site to board or be discharged from public and private transport.</p> <p>(d) Provide pedestrian crossings, manned or with traffic signals.</p> <p>(e) Prevent vehicles entering or exiting the Site carrying persons in the back of trucks, pick-ups or the like.</p> <p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p> <p>2.2.6 Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community; and</p> <p>(b) If so required by the Particular Safety Specification, Conduct traffic safety and</p>	<p>restriction, detour and roadwork signs;</p> <p>(b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike;</p> <p>(c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes; and</p> <p>(2) Maintain the various signs regularly, including repairing, painting and cleaning. Ensure that all are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.</p> <p>2.2.5 Traffic Accident Prevention at Site Entrance</p> <p>(1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:</p> <p>(a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment; and</p> <p>(b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect against accident.</p> <p>(c) Provide designated areas for anyone entering the Site to board or be discharged from public and private transport.</p> <p>(d) Provide pedestrian crossings, manned or with traffic signals.</p> <p>(e) Prevent vehicles entering or exiting the Site carrying persons in the back of trucks, pick-ups or the like.</p> <p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p> <p>2.2.6 Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community; and</p> <p>(b) If so required by the Particular Safety Specification, Conduct traffic safety and</p>
<p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p> <p>2.2.6 Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community; and</p> <p>(b) If so required in the Particular Safety Specification, conduct traffic safety and</p>	<p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p> <p>2.2.6 Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community; and</p> <p>(b) If so required in the Particular Safety</p>	<p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p> <p>2.2.6 Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community; and</p> <p>(b) If so required by the Particular Safety Specification, Conduct traffic safety and</p>	<p>(2) Priority shall be given to pedestrians and passing vehicles at the entrance.</p> <p>2.2.6 Community Relations</p> <p>(1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:</p> <p>(a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby community; and</p> <p>(b) If so required by the Particular Safety Specification, Conduct traffic safety and</p>

<p>awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>	<p>Specification, conduct traffic safety and awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>	<p>awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>	<p>awareness activities for the local community.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.</p> <p>(3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.</p>
<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1 General</p> <p>(1) Non-authorized personnel in this context shall mean Contractor's Personnel, Employer's Personnel or any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official "permit to work" issued to them by the HSO:</p> <p>(2) The Contractor shall prohibit non-authorized personnel from entering areas where Dangerous Work is being undertaken.</p> <p>(3) For general requirements of Dangerous work refer to JSSS 1.19 [Dangerous Work].</p> <p>(4) The Contractor shall prepare permits to work according to characteristics of the Dangerous Work referring to the requirements of OSHA Subpart AA-Confined Spaces in Construction, § 1926.1204 Permit-required confined space program, § 1926.1205 Permitting process, and § 1926.1206 Entry permit.</p> <p>2.3.2 Demarcation and Requirements</p>	<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1 General</p> <p>(1) Non-authorized personnel in this context shall mean Contractor's Personnel, Employer's Personnel or any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official "permit to work" issued to them by the HSO.</p> <p>(2) The Contractor shall prohibit non-authorized personnel from entering areas where Dangerous Work is being undertaken.</p> <p>(3) For general requirements of Dangerous work refer to JSSS 1.19 [Dangerous Work].</p> <p>(4) The Contractor shall prepare permits to work according to characteristics of the Dangerous Work referring to the requirements of OSHA Subpart AA-Confined Spaces in Construction, §1926.1204 Permit-required confined space program, §1926.1205 Permitting process, and §1926.1206 Entry permit.</p>	<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1. General</p> <p><i>Your requirement is to alter the sequence of the following items but the result is not logical, please review as follows:</i></p> <p>(1) The Contractor shall prohibit unauthorised personnel from entering areas where Dangerous Work is being undertaken</p> <p>(2) For general requirements of Dangerous work refer to JSSS 1.22 [Dangerous Work].</p> <p>(3) "Unauthorised personnel" in this context shall mean Contractor's Personnel, Employer's Personnel and any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official permit issued to them by the HSO, for that specific work place in accordance with JSSS 1.23 [Permit to Work System].</p> <p>(4) Workers assigned to Dangerous Work shall be subject to the Permit to Work System described in JSSS 1.23 [Permit to Work System].</p> <p><i>Please note that the Permit to Work System applies to all high-risk work in other Chapters in addition to Dangerous Work.</i></p> <p><i>This is therefore better included as a general requirement in Chapter 1 and I have now drafted a suitable clause JSSS 1.23, to cover this. I have also included reference in Annex 1.3, safety plan.</i></p> <p><i>OSHA specifically refers to permits for confined spaces not to all high- risk areas therefor it does not fit here., however it is conveniently relevant to confined spaces in Section 2.1 so have transferred it there as generally applicable not just to work permits.</i></p> <p>NK: We adopted MD's proposal.</p>	<p>2.3 PROHIBITION OF ENTRY – DANGEROUS WORK</p> <p>2.3.1 General</p> <p>(1) The Contractor shall prohibit unauthorised personnel from entering areas where Dangerous Work is being undertaken</p> <p>(2) For general requirements of Dangerous work refer to JSSS 1.22 [Dangerous Work].</p> <p>(3) "Unauthorised personnel" in this context shall mean Contractor's Personnel, Employer's Personnel and any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official permit issued to them by the HSO, for that specific work place in accordance with JSSS 1.23 [Permit to Work System].</p> <p>(4) Workers assigned to Dangerous Work shall be subject to the Permit to Work System described in JSSS 1.23 [Permit to Work System].</p> <p>2.3.2 Demarcation and Requirements</p>

<p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of non-authorised personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>2.3.3 Example of Dangerous Work</p> <p>For clarity Dangerous Work is understood also to include the following for example:</p> <p>(1) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals, gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p> <p>(2) Welding work, hot cutting work or demolition work.</p> <p>(3) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter.</p> <p>(4) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold</p> <p>(5) Work in areas where there is potential exposure to harmful radiation or ultrasound.</p>	<p>2.3.2 Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of non-authorised personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>2.3.3 Example of Dangerous Work</p> <p>For clarity Dangerous Work is understood also to include the following for example:</p> <p>(1) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals, gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p> <p>(2) Welding work, hot cutting work or demolition work.</p> <p>(3) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter.</p> <p>(4) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold</p>	<p>2.3.2. Demarcation and Requirements</p> <p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of unauthorised personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>(3) No-one, no matter their position of authority, should be allowed to enter, if not so authorised to do so and the Contactor shall ensure that Spotters do not face any adverse repercussions because of a refusal to allow access.</p> <p>NK: Added as MD did.</p> <p>2.3.3. Examples of Dangerous Work</p> <p>For clarity Dangerous Work shall also include:</p> <p><i>I thought we had agreed to leave UXO in? I have encountered it at least twice on JICA projects and have already drafted full clauses to cover this: The comment "Contractor never handle unexploded ordnance himself: is not always correct however if Employer is to remove UXO, then this should be stated in JSSS so that obligation is clear to both parties:;</i></p> <p>NK: Added as Md did.</p> <p>(1) The detection, safe removal and disposal of Unexploded Ordnance as referred to in JSSS 1.39 [Unexploded Ordnance].</p> <p>(2) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals, gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p> <p>(3) Welding work, hot cutting work or demolition work.</p> <p>(4) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter, for example scaffolding erection, use and dismantling, and areas where Contractor's Equipment is operating and the HSO considers there to be a risk of any accident.</p> <p>(5) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold</p>	<p>(1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.</p> <p>(2) The Spotter shall be established outside the working area, and shall prevent the entry of unauthorised personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.</p> <p>(3) No-one, no matter their position of authority, should be allowed to enter, if not so authorised to do so and the Contactor shall ensure that Spotters do not face any adverse repercussions because of a refusal to allow access.</p> <p>2.3.3 Examples of Dangerous Work</p> <p>For clarity Dangerous Work shall also include:</p> <p>(1) The detection, safe removal and disposal of Unexploded Ordnance as referred to in JSSS 1.39 [Unexploded Ordnance].</p> <p>(2) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals, gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.</p> <p>(3) Welding work, hot cutting work or demolition work.</p> <p>(4) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter, for example scaffolding erection, use and dismantling, and areas where Contractor's Equipment is operating and the HSO considers there to be a risk of any accident.</p> <p>(5) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold</p> <p>(6) Work in areas where there is potential exposure</p>
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<p>(6) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment].</p> <p>(7) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.</p> <p>(8) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.</p> <p>(9) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.</p>	<p>(5) Work in areas where there is potential exposure to harmful radiation or ultrasound.</p> <p>(6) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment].</p> <p>(7) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.</p> <p>(8) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.</p> <p>(9) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.</p>	<p>(6) Work in areas where there is potential exposure to harmful radiation or ultrasound.</p> <p>(7) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS エラー! 参照元が見つかりません。 [Work Environment].</p> <p>(8) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.</p> <p>(9) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.</p> <p>(10) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.</p>	<p>to harmful radiation or ultrasound.</p> <p>(7) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS エラー! 参照元が見つかりません。 [Work Environment].</p> <p>(8) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.</p> <p>(9) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.</p> <p>(10) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.</p>
<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1 Definitions</p> <p>In accordance with the definition provided in JSSS Annex1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p> <p>2.4.2 Duties</p> <p>Duties include for example:</p> <p>(1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out.</p> <p>(2) Giving appropriate guidance and signals during construction equipment operations to preventing the construction equipment tipping, overturning or falling.</p> <p>(3) Giving appropriate guidance and signals to prevent the Contractor's Personnel from being struck or pinned by construction equipment.</p> <p>(4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing.</p> <p>(5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within</p>	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1 Definitions</p> <p>In accordance with the definition provided in JSSS Annex1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p> <p>2.4.2 Duties</p> <p>Duties include for example:</p> <p>(1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out.</p> <p>(2) Giving appropriate guidance and signals during construction equipment operations to preventing the construction equipment tipping, overturning or falling.</p> <p>(3) Giving appropriate guidance and signals to prevent the Contractor's Personnel from being struck or pinned by construction equipment.</p> <p>(4) Assisting drivers of trucks and operators of other Contractor's Equipment in positioning their vehicles particularly in reversing.</p> <p>(5) Directing operators and drivers to prevent Contractor's Equipment, Goods in transit, transport and the like from coming into contact with overhead power lines when working within</p>	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1 Definitions</p> <p>In accordance with the definition provided in JSSS Annex1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p> <p>2.4.2 Duties</p> <p>Duties include for example:</p> <p>(1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out.</p> <p>(2) Giving appropriate guidance and signals during operation of Contractor's Equipment to prevent the equipment tipping, overturning or falling.</p> <p>(3) Giving appropriate guidance and signals to prevent Contractor's Personnel from being struck or pinned by Contractor's Equipment.</p> <p>(4) Assisting drivers of vehicles including trucks and operators of other Contractor's Equipment in positioning their vehicles particularly when manoeuvring.</p> <p>(5) Directing operators and drivers to prevent Contractor's Personnel, Contractor's Equipment, Goods in transit, transport and the like from coming into contact with Overhead</p>	<p>2.4 SPOTTERS, FLAGMEN AND THE LIKE</p> <p>2.4.1. Definitions</p> <p>In accordance with the definition provided in JSSS Annex1.1 [Definitions and Abbreviations], a reference to either of Spotter or Flagman in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.</p> <p>2.4.2 Duties</p> <p>Duties include for example:</p> <p>(1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out.</p> <p>(2) Giving appropriate guidance and signals during operation of Contractor's Equipment to prevent the equipment tipping, overturning or falling.</p> <p>(3) Giving appropriate guidance and signals to prevent Contractor's Personnel from being struck or pinned by Contractor's Equipment.</p> <p>(4) Assisting drivers of vehicles including trucks and operators of other Contractor's Equipment in positioning their vehicles particularly when manoeuvring.</p> <p>(5) Directing operators and drivers to prevent Contractor's Personnel, Contractor's Equipment, Goods in transit, transport and the like from coming into contact with Overhead</p>

<p>close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines.</p> <p>(6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's Equipment is working, construction operations are proceeding, vehicles are passing or where accidents is likely to occur.</p> <p>(7) Monitoring working locations and conditions and alerting relevant Contractor's Personnel if necessary.</p> <p>(8) Any other similar duties and assistance.</p> <p>2.4.3 Placement</p> <p>(1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed.</p> <p>(2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention.</p> <p>2.4.4 Safety</p> <p>The Contractor shall:</p> <p>(1) Ensure the safety of Spotters when directing vehicles or Contractor's Equipment.</p> <p>(2) Ensure that Spotters and drivers agree on hand signals before reversing.</p> <p>(3) Instruct Spotters to maintain visual contact at all</p>	<p>close proximity of them and to prevent same from encroaching upon minimum allowable distance from power lines.</p> <p>(6) Controlling pedestrian and vehicle traffic on and adjacent to the Site and giving instructions to avoid accidents in areas where Contractor's Equipment is working, construction operations are proceeding, vehicles are passing or where accidents is likely to occur.</p> <p>(7) Monitoring working locations and conditions and alerting relevant Contractor's Personnel if necessary.</p> <p>(8) Any other similar duties and assistance.</p> <p>2.4.3 Placement</p> <p>(1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed.</p> <p>(2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention.</p> <p>2.4.4 Safety</p> <p>The Contractor shall:</p> <p>(1) Ensure the safety of Spotters when directing vehicles or Contractor's Equipment.</p> <p>(2) Ensure that Spotters and drivers agree on hand signals before reversing.</p> <p>(3) Instruct Spotters to maintain visual contact at all</p>	<p>Services as defined in JSSS 3.0 [<i>Existing Underground, Concealed and Overhead Services</i>] when working within close proximity and preventing same from encroaching upon minimum allowable distance from Overhead Services.</p> <p>(6) Controlling pedestrian and vehicular traffic, Contractor's Personnel and Contractor's Equipment on roads and footpaths on or adjacent to the Site, adjacent to buildings, Operational Areas, places with poor visibility, slopes and vertical drops, places where there is risk of falling or landslide and places where excavation and transporting equipment perform excavation works close to workers.</p> <p>(7) Monitoring working locations and conditions and preventing Contractor's Personnel, Employer's Personnel and any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed, from entering areas where Dangerous Work is being carried out or where there is any risk of potential injury and accident.</p> <p>(8) Any other similar duties and assistance.</p> <p>2.4.3 Placement</p> <p>(1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed.</p> <p>(2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention.</p> <p>Suggest the following may also be helpful:</p> <p>NK: We considers good idea but wonder if practical. 1.24 specifies as below. It is better to specify first aid training to not only to Spotters but also supervisors, Operation leaders and other workers. Therefore, (3) is not added here.</p> <p>1.24 Accident Response Plan</p> <p>1.24.5 The Contractor shall provide the following medical and first aid facilities:</p> <p>(2) First aid training, appointment of first aiders and dissemination of information.</p> <p>(3) The Contractor shall also train and equip Spotters to perform basic first aid.</p> <p>2.4.4 Safety</p> <p>The Contractor shall:</p> <p>(1) Ensure the safety of Spotters when directing vehicles or Contractor's Equipment.</p> <p>(2) Ensure that Spotters and drivers agree on hand signals before assisting with vehicle manoeuvring.</p> <p>(3) Instruct Spotters to maintain visual contact at all</p>	<p>Services as defined in JSSS 3.0 [<i>Existing Underground, Concealed and Overhead Services</i>] when working within close proximity and preventing same from encroaching upon minimum allowable distance from Overhead Services.</p> <p>(6) Controlling pedestrian and vehicular traffic, Contractor's Personnel and Contractor's Equipment on roads and footpaths on or adjacent to the Site, adjacent to buildings, Operational Areas, places with poor visibility, slopes and vertical drops, places where there is risk of falling or landslide and places where excavation and transporting equipment perform excavation works close to workers.</p> <p>(7) Monitoring working locations and conditions and preventing Contractor's Personnel, Employer's Personnel and any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed, from entering areas where Dangerous Work is being carried out or where there is any risk of potential injury and accident.</p> <p>(8) Any other similar duties and assistance.</p> <p>2.4.3 Placement</p> <p>(1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed.</p> <p>(2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention.</p> <p>2.4.4 Safety</p> <p>The Contractor shall:</p> <p>(1) Ensure the safety of Spotters when directing vehicles or Contractor's Equipment.</p> <p>(2) Ensure that Spotters and drivers agree on hand signals before assisting with vehicle manoeuvring.</p> <p>(3) Instruct Spotters to maintain visual contact at all</p>
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<p>times with the driver while the vehicle is reversing.</p> <p>(4) Instruct drivers to stop reversing immediately if they lose sight of the Spotter.</p> <p>(5) Not give Spotters additional duties while they are already acting as Spotters.</p> <p>(6) Instruct Spotters not to use personal mobile phones, personal headphones, or other items which could pose a distraction during spotting activities.</p> <p>(7) Provide Spotters with high-visibility clothing, especially during night operations.</p> <p>2.4.5 Signals</p> <p>(1) To avoid the risk of injury to the Contractor's Personnel when operating Contractor's Equipment, the Contractor shall establish a standardised signal system and appoint a Spotter to give necessary signals to the Contractor's Personnel.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.</p> <p>(3) The Contractor shall inform and remind all Contractor's Personnel of the established standardised signal system as follows:</p> <p>(a) By training all Contractor's Personnel including those designated as Spotters at the time they first enter the Site on the signals;</p> <p>(b) By re-confirming with the Contractor's Personnel, the established standardised signal system in the TBM before the start of the work each day; and</p> <p>(c) By posting signboards on Site where required showing the standard signals and sticking a smaller-sized version directly on the concerned Contractor's Equipment.</p> <p>2.4.6 Qualification of Personnel</p> <p>The Contractor shall ensure that all Spotters possess sufficient experience and ability and are adequately trained and supervised to perform their duties.</p> <p>2.4.7 Radios Communication tools</p>	<p>times with the driver while the vehicle is reversing.</p> <p>(4) Instruct drivers to stop reversing immediately if they lose sight of the Spotter.</p> <p>(5) Not give Spotters additional duties while they are already acting as Spotters.</p> <p>(6) Instruct Spotters not to use personal mobile phones, personal headphones, or other items which could pose a distraction during spotting activities.</p> <p>(7) Provide Spotters with high-visibility clothing, especially during night operations.</p> <p>2.4.5 Signals</p> <p>(1) To avoid the risk of injury to the Contractor's Personnel when operating Contractor's Equipment, the Contractor shall establish a standardised signal system and appoint a Spotter to give necessary signals to the Contractor's Personnel.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.</p> <p>(3) The Contractor shall inform and remind all Contractor's Personnel of the established standardised signal system as follows:</p> <p>(a) By training all Contractor's Personnel including those designated as Spotters at the time they first enter the Site on the signals;</p> <p>(b) By re-confirming with the Contractor's Personnel, the established standardised signal system in the TBM before the start of the work each day; and</p> <p>(c) By posting signboards on Site where required showing the standard signals and sticking a smaller-sized version directly on the concerned Contractor's Equipment.</p> <p>2.4.6 Qualification of Personnel</p> <p>The Contractor shall ensure that all Spotters possess sufficient experience and ability and are adequately trained and supervised to perform their duties.</p> <p>2.4.7 Communication tools</p>	<p>times with the driver during vehicle manoeuvring.</p> <p>(4) Instruct drivers to stop manoeuvring immediately if they lose sight of the Spotter.</p> <p>(5) Not give Spotters additional duties while they are already acting as Spotters.</p> <p>(6) Instruct Spotters not to use personal mobile phones, personal headphones, or other items which could pose a distraction during spotting activities.</p> <p>(7) Provide Spotters with high-visibility clothing, especially during night operations.</p> <p>2.4.5 Signals</p> <p>(1) To avoid the risk of injury to the Contractor's Personnel when operating Contractor's Equipment, the Contractor shall establish a standardised signal system and appoint a Spotter to give necessary signals to the Contractor's Personnel.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.</p> <p>(3) The Contractor shall inform and remind all Contractor's Personnel including those designated as Spotters, of the established standardised signal system as follows:</p> <p>(a) By training all personnel when they first start work at the Site;</p> <p>(b) By re-confirming with the all personnel in the TBM before the start of work each day; and</p> <p>(c) By posting signboards on Site where required showing the standardised signals and placing a smaller-sized sticker version directly on the concerned Contractor's Equipment.</p> <p>2.4.6 Qualification of Personnel</p> <p>The Contractor shall ensure that all Spotters possess sufficient experience and ability and are adequately trained and supervised to perform their duties.</p> <p>2.4.7 Communication Tools</p> <p>Please note that hand-held radios and walkie-talkies are actually the same and it appears strange to use both expressions for the same thing. The term "walkie-talkies" is originally a slang expression.</p> <p>Is it and walkie-talkies or just added??</p> <p>Who decides "when necessary".</p>	<p>times with the driver during vehicle manoeuvring.</p> <p>(4) Instruct drivers to stop manoeuvring immediately if they lose sight of the Spotter.</p> <p>(5) Not give Spotters additional duties while they are already acting as Spotters.</p> <p>(6) Instruct Spotters not to use personal mobile phones, personal headphones, or other items which could pose a distraction during spotting activities.</p> <p>(7) Provide Spotters with high-visibility clothing, especially during night operations.</p> <p>2.4.5 Signals</p> <p>(1) To avoid the risk of injury to the Contractor's Personnel when operating Contractor's Equipment, the Contractor shall establish a standardised signal system and appoint a Spotter to give necessary signals to the Contractor's Personnel.</p> <p>(2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.</p> <p>(3) The Contractor shall inform and remind all Contractor's Personnel including those designated as Spotters, of the established standardised signal system as follows:</p> <p>(a) By training all personnel when they first start work at the Site;</p> <p>(b) By re-confirming with the all personnel in the TBM before the start of work each day; and</p> <p>(c) By posting signboards on Site where required showing the standardised signals and placing a smaller-sized sticker version directly on the concerned Contractor's Equipment.</p> <p>2.4.6 Qualification of Personnel</p> <p>The Contractor shall ensure that all Spotters possess sufficient experience and ability and are adequately trained and supervised to perform their duties.</p> <p>2.4.7 Communication Tools</p>
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<p>The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, walkie-talkies to ensure effective and safe communications and train all personnel assigned to Spotters in their use.</p> <p>2.4.8 PPE</p> <p>The Contractor shall ensure Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>	<p>The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, walkie-talkies to ensure effective and safe communications and train all personnel assigned to Spotters in their use.</p> <p>2.4.8 PPE</p> <p>The Contractor shall ensure Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>	<p>NK: "walkie-talkies" are deleted. Not all of Spotters use radios, so when necessary is left as it is. HSO shall decide when/where necessary. Training how to use radios is necessary to all Spotters.</p> <p>(1) The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, to ensure effective and safe communications and train all Spotters in their use.</p> <p>Suggest the following may also be helpful:</p> <p>NK: The following is detail requirement, so we can leave the Contractor to plan how to do and not add (2).</p> <p>(2) Radios shall have removable rechargeable batteries, that can be charged outside the radio and a spare battery shall be provided for each radio. Charging stations shall be provided at suitable locations so that the spare radio batteries can be charged when not in the radio.</p> <p>2.4.8 PPE</p> <p>The Contractor shall ensure that all Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>	<p>The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, to ensure effective and safe communications and train all Spotters in their use.</p> <p>2.4.8 PPE</p> <p>The Contractor shall ensure that all Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.</p>
<p>2.5 FALL PREVENTION</p> <p>2.5.1 General</p>	<p>2.5 FALL PREVENTION</p> <p>2.5.1 General</p>	<p>2.5 FALL PREVENTION</p> <p>2.5.1 General</p> <p><i>(Please refer also to the earlier notes under 2.1.2 Asbestos and also 2.6 Falling Objects etc.)</i></p> <p><i>The following paragraph is designed to raise safety awareness to some contractors who are responsible (not the Employer) and who may not be so familiar with this. The suggestion that this be moved to the User Guide is not understood or logical as this is of no meaning to the Employer for whom the User Guide is designed and intended. Please clarify</i></p> <p>NK: We agree that one of purpose of JSSS is to raise safety awareness as mentioned above. However, SS considers as follows: If we adopt to provide awareness sentences in JSSS, we shall provide such sentences not only for fall prevention, asbestos, falling objects but also other all works and activities because fatal and injury accidents have occurred in all kinds of works and activities, .e.g. traffic accident. Therefore, we will not describe (1) in JSSS. Safety awareness can be made by specifying requirements in detail and concrete measures to be taken by the Contractor. The User Guide is for the Employer and consultants how to prepare Particular Safety Specification.</p>	<p>2.5 FALL PREVENTION</p> <p>2.5.1 General Items</p>

<p>(1) By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for fall prevention complying with those the technical requirements for fall prevention as specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M – Fall Protection of “Part 1926 - Safety and Health Regulations for Construction” and as follows:</p> <p>(a) Requirements relating to fall protection for employees workers working on scaffolds shall comply with in Subpart L - Scaffolds;</p> <p>(b) Requirements relating to fall protection for employees workers working on cranes and derricks shall comply with in Subpart CC - Cranes and Derricks in Construction;</p> <p>(c) Fall protection requirements for employees workers performing steel erection work (except for towers and tanks) shall comply with in Subpart R - Steel Erection;</p> <p>(d) Requirements relating to fall protection for employees workers working on certain types of equipment used in tunnelling operations shall comply with in Subpart S - Underground Construction, Caissons, Cofferdams and Compressed Air;</p> <p>(e) Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers shall comply with in §1926.105 Safety nets;</p> <p>(f) Requirements relating to fall protection for employees workers working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment shall comply with in Subpart V - Electric Power Transmission and</p>	<p>(1) By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for fall prevention complying with those the technical requirements for fall prevention as specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M – Fall Protection of “Part 1926 - Safety and Health Regulations for Construction” and as follows:</p> <p>(a) Requirements relating to fall protection for workers working on scaffolds in Subpart L - Scaffolds;</p> <p>(b) Requirements relating to fall protection for workers working on cranes and derricks in Subpart CC - Cranes and Derricks in Construction;</p> <p>(c) Fall protection requirements for workers performing steel erection work (except for towers and tanks) in Subpart R - Steel Erection;</p> <p>(d) Requirements relating to fall protection for workers working on certain types of equipment used in tunneling operations in Subpart S - Underground Construction, Caissons, Cofferdams and Compressed Air;</p> <p>(e) Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers in §1926.105 Safety nets;</p> <p>(f) Requirements relating to fall protection for workers working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment in Subpart V - Electric Power Transmission and Distribution; and</p> <p>(g) Requirements relating to fall protection for</p>	<p>I want to propose the safety awareness should be made in safety guidance separately from JSSS. Therefore, (1) below is deleted.</p> <p>(1) Falls are the leading cause of accidents in the construction industry, accounting for more than 40% of all construction fatalities in Japan and it is emphasised therefore that particular consideration be given by the Contractor and appropriate measures selected and used to avoid this risk.</p> <p>The following is a standard description that I have used consistently in numerous locations throughout the various Chapters and Sections of JSSS, as it is changed by JICA here I have adjusted this everywhere.</p> <p>NK: We agreed to MD's proposed sentences.</p> <p>(2) By reference to JSSS 1.4 [Compliance with JSSS and Other Regulations], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for fall prevention complying with the technical requirements specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M – Fall Protection of “Part 1926 - Safety and Health Regulations for Construction” and as follows:</p> <p>(a) Requirements relating to fall protection for workers on scaffolds in Subpart L.</p> <p>(b) Requirements relating to fall protection for workers on cranes and derricks in Subpart CC.</p> <p>(c) Fall protection requirements for workers performing steel erection work (except for towers and tanks) in Subpart R.</p> <p>(d) Requirements relating to fall protection for workers on certain types of equipment used in tunnelling operations, underground construction, caissons, cofferdams and compressed air in Subpart S.</p> <p>(e) Requirements relating to fall protection for workers engaged on the erection of tanks and communication and broadcast towers in Subpart E §1926.105 (Safety Nets).</p> <p>(f) Requirements relating to fall protection for employees working from workers on aerial lifts or poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment in Subpart V, Electric Power Transmission and Distribution; and</p> <p>(g) Requirements relating to fall protection for employees working on stairways and ladders</p>	<p>(1) By reference to JSSS 1.4 [Compliance with JSSS and Other Regulations], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for fall prevention complying with the technical requirements specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M – Fall Protection of “Part 1926 - Safety and Health Regulations for Construction” and as follows:</p> <p>(a) Requirements relating to fall protection for workers on scaffolds in Subpart L.</p> <p>(b) Requirements relating to fall protection for workers on cranes and derricks in Subpart CC.</p> <p>(c) Fall protection requirements for workers performing steel erection work (except for towers and tanks) in Subpart R.</p> <p>(d) Requirements relating to fall protection for workers on certain types of equipment used in tunnelling operations, underground construction, caissons, cofferdams and compressed air in Subpart S.</p> <p>(e) Requirements relating to fall protection for workers engaged on the erection of tanks and communication and broadcast towers in Subpart E §1926.105 (Safety Nets).</p> <p>(f) Requirements relating to fall protection for workers on aerial lifts or poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment in Subpart V, Electric Power Transmission and Distribution; and</p> <p>(g) Requirements relating to fall protection for employees working on stairways and ladders are provided in Subpart X, Stairways and Ladders.</p>
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<p>Distribution; and</p> <p>(g) Requirements relating to fall protection for employees workers working on stairways and ladders are provided in Subpart X - Stairways and Ladders.</p> <p>(2) For use of personnel who are engaged in inspection, investigation, or assessment. The Contractor shall develop safety procedures for personnel who are engaged in inspection, investigation, or assessment to confirm the workplace conditions for the safety of workers prior to the actual start of construction work or to confirm the site condition for the safety of workers after all construction work has been completed.</p> <p>JC: これは墜落に限らない一般的な事項です。これはむしろ総則に入れるべき事項ではないでしょうか。(又は総則に既に類似の表現があるなら削除)</p> <p>This is general requirement not only for fall prevention. It may be included in Chapter 1. (if already specified in Chapter 1, it shall be deleted.)</p> <p>JC6: 2.5.1(2): 御社の説明の意図に沿った内容にするならば、for use of personnel who engage in.....とした方が良いと思われ、そのように修正しています。但し、この条項が本当にこの場所に置いておくことがふさわしいか否かは再検討願います。</p> <p>2.5.1(2): JC considers it is better to revise it to “for use of personnel who engage in...” to specify the same content as the intention in NK’s explanation. Please reconsider where is proper location to specify this clause.</p> <p>(3) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(4) The Contractor must pay special attention to whether a restraint system (PFRS) or arrest (PFAS) system is required, noting the defined terms in Chapter 1 General for each of these systems.</p> <p>JC: 不要ではないでしょうか？ 削除をご検討ください。Is (4) necessary? Please consider deleting (4).</p> <p>NK: Deleted.</p> <p>(5) As a general rule, the Contractor shall take “fall restraint” measures wherever practicable rather than “fall arrest” measures.</p> <p>(6) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS</p> <p>2.5.2 Height Thresholds</p>	<p>workers working on stairways and ladders in Subpart X - Stairways and Ladders.</p> <p>(2) For use of personnel who are engaged in inspection, investigation, or assessment, the Contractor shall develop safety procedures to confirm the workplace conditions for the safety of workers prior to the actual start of construction work or to confirm the site condition for the safety of workers after all construction work has been completed.</p> <p>To MD: Please consider the JC comment about the location of (2), may be in Chapter 1.</p> <p>(3) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(4) As a general rule, the Contractor shall take “fall restraint” measures wherever practicable rather than “fall arrest” measures.</p> <p>(5) JSSS Section 2.5 [Fall Prevention] shall be read in conjunction with respective other parts of JSSS</p> <p>2.5.2 Height Thresholds</p> <p>The threshold for fall protection in construction work</p>	<p>are provided in Subpart X, Stairways and Ladders.</p> <p><i>The following has been edited as shown and transferred to Chapter 1, 1.22.4.</i></p> <p>NK: Confirmed the above.</p> <p>(3) The HSO shall ensure where Dangerous Work is to be performed, that preparatory pre work inspections are carried out to investigate and assess the work to be performed and ascertain the conditions likely to be encountered. Such inspection work shall be carried out by specialist trained personnel. The Contractor shall prepare safety procedures to ensure that any such inspection personnel are not placed at risk because of any unsafe environmental or other adverse or dangerous conditions.</p> <p>(4) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(5) The Contractor must shall pay special attention to whether a restraint system (PFRS) or arrest (PFAS) system is required.</p> <p>NK: (5) is deleted because (6) covers (5). (6) below is modified below.</p> <p>(6) As a general rule, the Contractor shall take “fall restraint system (PFRS)” measures wherever practicable rather than “fall arrest system (PFAS)” measures.</p> <p>(7) JSSS エラー! 参照元が見つかりません。 [Fall Prevention] shall be read in conjunction with other respective parts of JSSS.</p>	<p>(2) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.</p> <p>(3) As a general rule, the Contractor shall take “fall restraint system (PFRS)” measures wherever practicable rather than “fall arrest system (PFAS)” measures.</p> <p>(4) JSSS エラー! 参照元が見つかりません。 [Fall Prevention] shall be read in conjunction with other respective parts of JSSS.</p> <p>2.5.2 Height Thresholds</p>
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<p>The threshold for fall protection in construction work is 2m. The Contractor must provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3 Facilities for Ascending and Descending</p> <p>When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor's Personnel to safely access and descend from such work levels.</p> <p>2.5.4 Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p> <p>(2) Accordingly, and in In advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk pre assessment including checking the following and shall record the results:</p> <p>(a) Work areas and the conditions of adjacent areas;</p> <p>(b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;</p> <p>(c) Status of access leading to work areas and any anchorages; and,</p> <p>(d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.</p> <p>2.5.5 Handrails</p> <p>The Contractor shall provide handrails at places where there is risk of fall.</p> <p>(1) Handrails shall be complete with top-rails of minimum 85 cm high and mid-rails placed at a height of 35 - 50 cm.</p> <p>(2) The top-rail shall be designed to withstand 90 kg. of horizontal force and mid-rails 70 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety</p>	<p>is 2m. The Contractor must provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3 Facilities for Ascending and Descending</p> <p>When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor's Personnel to safely access and descend from such work levels.</p> <p>2.5.4 Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p> <p>(2) In advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk assessment including checking the following and shall record the results:</p> <p>(a) Work areas and the conditions of adjacent areas;</p> <p>(b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;</p> <p>(c) Status of access leading to work areas and any anchorages; and</p> <p>(d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.</p> <p>2.5.5 Handrails</p> <p>The Contractor shall provide handrails at places where there is risk of fall.</p> <p>(1) Handrails shall be complete with top-rails of minimum 85 cm high and mid-rails placed at a height of 35 - 50 cm.</p> <p>(2) The top-rail shall be designed to withstand 90 kg. of horizontal force and mid-rails 70 kg. of horizontal force, sufficient uprights to sustain these forces.</p> <p>(3) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without corrosion, deformity or damage of any kind.</p> <p>(4) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety</p>	<p>2.5.2 Height Thresholds</p> <p>The threshold for fall protection in construction work is 2 m.</p> <p>The Contractor must shall provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3 Facilities for Ascending and Descending</p> <p>When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor's Personnel to safely ascend and descend from such work levels.</p> <p>2.5.4 Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p> <p>(2) In advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk assessment as necessary, including checking the following and recording the results:</p> <p>(a) Work areas and the conditions of adjacent areas;</p> <p>(b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;</p> <p>(c) Status of access leading to work areas and any anchorages; and,</p> <p>(d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.</p> <p>2.5.5 Handrails</p> <p>(1) The Contractor shall provide handrails at places where there is risk of fall.</p> <p>(2) Handrails shall be complete with top-rails, minimum 85 cm high and mid-rails at a height of 35 - 50 cm.</p> <p>(3) Top-rails shall be designed to withstand 90 kg. of horizontal force and mid-rails 70 kg. of horizontal force and sufficient uprights shall be provided to sustain these forces.</p> <p>(4) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without excessive corrosion, deformity or damage of any</p>	<p>The threshold for fall protection in construction work is 2 m.</p> <p>The Contractor shall provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.</p> <p>2.5.3 Facilities for Ascending and Descending</p> <p>When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor's Personnel to safely ascend and descend from such work levels.</p> <p>2.5.4 Risk Assessments</p> <p>(1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.</p> <p>(2) In advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk assessment as necessary, including checking the following and recording the results:</p> <p>(a) Work areas and the conditions of adjacent areas;</p> <p>(b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;</p> <p>(c) Status of access leading to work areas and any anchorages; 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<p>measures including for example:</p> <ul style="list-style-type: none"> (a) Displaying appropriate warning signs; (b) Assigning a Spotter to direct non-essential Contractor's Personnel away; (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets. (d) Prohibiting entry to the working area of any non-authorized Contractor's Personnel (e) Handrails shall be restored immediately after the necessity for removal has ended. <p>2.5.6 Toeboards</p> <ul style="list-style-type: none"> (1) Toeboards shall be provided to all handrails to prevent risk of Falling Objects. (2) Toeboards shall be minimum 10cm high from top edge to the level of the working platform, runway or ramp. (3) Where material, is piled to such height that a 10cm toeboard does not provide protection, panelling from floor to mid-rail, or to top-rail shall be provided. <p>2.5.7 Temporary Walkways and Passageways</p> <p>(1) Installation of walkways and passageways</p> <p>The Contractor shall provide safe routes leading to, within and around working areas that ensure safety of passage for Contractor's Personnel and these shall be effectively maintained at all times.</p> <p>The Contractor shall display signs clearly indicating the use, extent and directions so that the Contractor's Personnel will adhere to these routes and other activities will be prevented from accessing these routes.</p>	<p>measures including for example:</p> <ul style="list-style-type: none"> (a) Displaying appropriate warning signs; (b) Assigning a Spotter to direct non-essential Contractor's Personnel away; (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets. (d) Prohibiting entry to the working area of any non-authorized Contractor's Personnel. (e) Handrails shall be restored immediately after the necessity for removal has ended. <p>2.5.6 Toeboards</p> <ul style="list-style-type: none"> (1) Toeboards shall be provided to all handrails to prevent risk of Falling Objects. (2) Toeboards shall be minimum 10cm high from top edge to the level of the working platform, runway or ramp. 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(3) Where material, is piled to such height that a 10cm toeboard does not provide protection, panelling from floor to mid-rail, or to top-rail shall be provided. <p>2.5.7 Temporary Access Around the Site</p> <p>(1) Walkways and Passageways</p> <p>For the purposes of interpretation:</p> <p>"Walkways" mean pedestrian footpaths at ground level or ramped for the use of Contractor's Personnel.</p> <p>"Passageways" are the same as walkways but are covered by a roof and maybe also have sides in order to protect all personnel from falling objects or adjacent activities.</p> <p>NK: Definitions of those terms in OSHA are mixed. The Wikidiff described as same as (1). We added (1) above. https://wikidiff.com/walkway/passageway</p> <p>(2) Safe Routes</p> <p>The Contractor shall provide walkways and passageways leading to, within and around the Site and any working areas within the Site.</p> <p>These shall be designed and constructed to ensure the safe passage of Contractor's Personnel and shall be provided with temporary lighting and effectively maintained at all times.</p>	<p>example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:</p> <ul style="list-style-type: none"> (a) Displaying appropriate warning signs; (b) Assigning a Spotter to direct non-essential Contractor's Personnel away; (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets. 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<p>(2) Handrails</p> <p>At any point where there may be a risk of Contractor's Personnel falling from temporary walkways and passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].</p> <p>Alternatively, the Contractor shall provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8 Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms can be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 5(4).</p> <p>2.5.9 Preventing Falls from the Ends and Openings of Working Platforms</p> <p>(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.</p> <p>(2) The Contractor shall provide handrails to all ends, edges and openings.</p> <p>(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.</p> <p>(4) If for any reason it is not possible to enclose the areas, or provide covers or when same is ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 [Handrails].</p> <p>2.5.10 Measures for Preventing Falls during Excavation</p>	<p>these routes and other activities will be prevented from accessing these routes.</p> <p>(2) Handrails</p> <p>At any point where there may be a risk of Contractor's Personnel falling from temporary walkways and passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].</p> <p>Alternatively, the Contractor shall provide alternative fall prevention equipment with the same or better functionality.</p> <p>2.5.8 Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms can be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 5(4).</p> <p>2.5.9 Preventing Falls from the Ends and Openings of Working Platforms</p> <p>(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.</p> <p>(2) The Contractor shall provide handrails to all ends, edges and openings.</p> <p>(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.</p> <p>(4) If for any reason it is not possible to enclose the areas, or provide covers or when same is temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 [Handrails].</p>	<p>The Contractor shall display signs clearly indicating the location, intended use and any restrictions and extent with directions so that the Contractor's Personnel can adhere to the routes.</p> <p>Other construction activities will be prevented from obstructing these routes.</p> <p>(3) Handrails</p> <p>At any point where there may be a risk of Contractor's Personnel falling from temporary walkways and passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].</p> <p>Alternatively, the Contractor shall provide fall prevention equipment with the same or better functionality.</p> <p>2.5.8 Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms shall be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 [Handrails].</p> <p>2.5.9 Preventing Falls from the Ends and Openings of Working Platforms</p> <p>(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.</p> <p>(2) The Contractor shall provide handrails to all ends, edges and openings.</p> <p>(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.</p> <p>(4) If for any reason it is not possible to provide handrails around working areas, or to provide covers or when covers are temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5</p>	<p>restrictions and extent with directions so that the Contractor's Personnel can adhere to the routes.</p> <p>Other construction activities will be prevented from obstructing these routes.</p> <p>(3) Handrails</p> <p>At any point where there may be a risk of Contractor's Personnel falling from temporary walkways and passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].</p> <p>Alternatively, the Contractor shall provide fall prevention equipment with the same or better functionality.</p> <p>2.5.8 Preventing Falls by Providing Temporary Working Platforms</p> <p>(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.</p> <p>(2) Temporary Working Platforms shall be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.</p> <p>(3) Temporary working platforms shall always have handrails.</p> <p>(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 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<p>Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <ol style="list-style-type: none"> (1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access. (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces. (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached. (4) Installing handrails where the slope shoulder is used as a passageway. (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system. (6) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in trench excavations that are 1.2 m or more in depth so as to require no more than 7.5 m of lateral travel for Contractor's Personnel. (7) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in deep excavations with/without shoring system and prohibiting all Contractor's Personnel from crossing on the shoring system. 	<p>2.5.10 Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <ol style="list-style-type: none"> (1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access. (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces. (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached. (4) Installing handrails where the slope shoulder is used as a passageway. (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system. (6) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in trench excavations that are 1.2 m or more in depth so as to require no more than 7.5 m of lateral travel for Contractor's Personnel. (7) Providing means of access and egress for example a stairway, ladder, ramp or other safe means in deep excavations with/without shoring system and prohibiting all Contractor's Personnel from crossing on the shoring system. 	<p>[Handrails].</p> <p>2.5.10 Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <ol style="list-style-type: none"> (1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access. (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces. (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached. (4) Installing handrails where the slope shoulder is used as a walkway or passageway. (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system. <p><i>I have added and edited your additional items below but they do appear to conflict with or duplicate the preceding paragraph. Please advise.</i></p> <p>NK: 2.5.3 Facilities for Ascending and Descending stipulate "When carrying out work at heights of 2 m or more, the Contractor shall provide facilities...". To avoid conflict with 2.5.3, we add the following why excavation of 1.2 m or more in depth need the measures.</p> <ol style="list-style-type: none"> (6) Providing safe means of access and egress using stairways, ladders, ramps and the like to all excavations such as trench, basement, footing excavations, which are 1.2 m or more in depth, generally requiring no more than 7.5m of lateral travel for Contractor's Personnel. (7) In deep excavations with/without shoring systems and Prohibit all Contractor's Personnel from crossing on struts of Earthwork-Support by using the shoring system. <p>NK: We want to specify (7) to stop workers crossing struts shown below of Earthwork Support to avoid their falling.</p>	<p>2.5.10 Measures for Preventing Falls during Excavation Work</p> <p>The Contractor shall take all necessary measures to prevent falls during excavation work including for example:</p> <ol style="list-style-type: none"> (1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access. (2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces. (3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached. (4) Installing handrails where the slope shoulder is used as a walkway or passageway. (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system. (6) Providing safe means of access and egress using stairways, ladders, ramps and the like to all excavations such as trench, basement, footing excavations, which are 1.2 m or more in depth, generally requiring no more than 7.5m of lateral travel for Contractor's Personnel. (7) Prohibit all Contractor's Personnel from crossing on struts of Earthwork.
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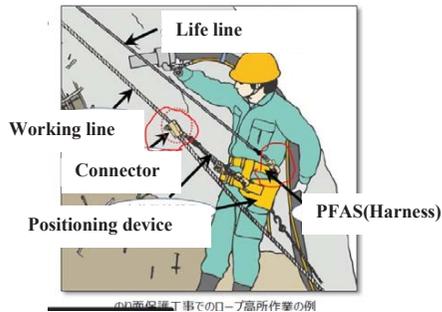
2.5.11 Measures for Preventing Falls during Rope Access Work

- (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example:
- (a) Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; and

JC: 要修文. Required to revise (a).

JC7: 2.5.11(1)(a)にある Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; という部分は修正が必要だと考えます。親綱に結び付けるのは PFRS ではなく、身体保持器具なのではないでしょうか？添付の図を参照してください。

2.5.11(1)(a): JC considers that it needs to correct "Installing lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached". The good to connect to working lines is not the PFRS but positioning device. Please refer to the attached figure.



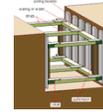
NK: revised.

- (b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.
- (2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:
- (a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;
- (b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;
- (c) Measures have been taken to prevent cutting or chafing, such as providing covers, where

2.5.11 Measures for Preventing Falls during Rope Access Work

- (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example:
- (a) Installing lifeline to which the PFAS is attached and working line to which the positioning device is attached; and

- (b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.
- (2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:
- (a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;
- (b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;
- (c) Measures have been taken to prevent cutting



2.5.11 Measures for Preventing Falls during Rope Access Work

- (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example:

- (a) Installing a lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; and

NK: Annex 1.1.2 (18) defines as below. The above is accepted.

"Personal Fall Restraint System" or "PFRS" (also referred to as a "Positioning Device System") means a fall protection system that is designed to restrict the movement of workers,

- (b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.
- (2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:
- (a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;
- (b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;
- (c) Measures have been taken to prevent cutting

2.5.11 Measures for Preventing Falls during Rope Access Work

- (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example:
- (a) Installing a lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; and

- (b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.
- (2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:
- (a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;
- (b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;
- (c) Measures have been taken to prevent cutting

<p>there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) The working line is anchored to two or more independent strong supports; and</p> <p>(e) The PFAS is securely attached to the harness and the connecting devices are compatible with the working line and lifeline used.</p> <p>JC: この記述はおかしいでしょうか。2.5.13(2)(d)には The PFAS shall be the full harness type and shall comprise...という記述があり、これでは「ハーネスにハーネスを取り付ける」という意味になりませんか？</p> <p>日本語の原文は「接続器具を用いて確実に取り付けること。なお接続器具は使用する親綱に適合したものを使用すること」であり、忠実な翻訳になっていません。</p> <p>JC9: 2.5.11(2)(e): 記述がおかしいように思えます(「ハーネスをハーネスにつける?」)。修正を検討して下さい。ロープ高所作業におけるハーネス(添付の図は古いので胴ベルトですが)は親綱につけるのではないのでしょうか？</p> <p>2.5.13(1)(b)にある PPE for という言葉は不要です。むしろここでは PPP(E)としての PFRS を論じています。</p> <p>2.5.11(2)(e): The description is strange “harness is attached to harness”. Please consider correcting it. In rope work, harness should be connected with working lines. “PPE for” is not necessary in 2.5.13(1)(b). Here, PFRS is discussed as PPE.</p> <p>NK: Revised as commented.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor’s Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p> <p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chafed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor’s Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide measures including providing Contractor’s Personnel PPE to prevent any danger to Contractor’s Personnel from falling objects.</p> <p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and</p>	<p>or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) The working line is anchored to two or more independent strong supports; and</p> <p>(e) The positioning device shall be securely connected to the working line with connectors and the connecting devices shall be compatible with the working line used.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor’s Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p> <p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chafed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor’s Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide measures including providing Contractor’s Personnel PPE to prevent any danger to Contractor’s Personnel from falling objects.</p> <p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all time throughout their assignment and</p>	<p>cannot be detached;</p> <p>(b) The working line and lifeline are of sufficient length to allow the Contractor’s Personnel to move up and down safely;</p> <p>(c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) That the working line is anchored to two or more independent strong supports; and</p> <p>(e) The positioning device shall be securely connected to the working line with connectors and the connecting devices shall be compatible with the working line used.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor’s Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p> <p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chafed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor’s Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide measures to prevent the risk of accident to any personnel</p>	<p>or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;</p> <p>(d) That the working line is anchored to two or more independent strong supports; and</p> <p>(e) The positioning device shall be securely connected to the working line with connectors and the connecting devices shall be compatible with the working line used.</p> <p>(3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor’s Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:</p> <p>(a) Location of each anchorage used to secure the working line and lifeline;</p> <p>(b) Types and strengths of the working line and lifeline to be used;</p> <p>(c) Lengths of the working line and lifeline to be used;</p> <p>(d) Protrusions where the ropes may be cut or chafed and measures to prevent this; and</p> <p>(e) Measures to prevent Contractor’s Personnel engaged in securing the working line and lifeline to the anchorages from falling.</p> <p>(4) The Contractor shall also provide measures to prevent the risk of accident to any personnel from Falling Objects; by using covered passageways and PPE</p> <p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all times throughout their assignment and</p>
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<p>direct the work based on the Safety Plan and perform the following duties:</p> <p>(a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;</p> <p>(b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;</p> <p>(c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFRS, PFAS and PPE; and</p> <p>(d) Ensure Contractor's Personnel use PFRS, PFAS correctly, and, have them fix the PFAS to the life lines.</p> <p>2.5.12 Further Measures for Contractor's Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including for example taking the following measures before any work commences:</p> <p>(1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.</p> <p>(2) Prohibit the unauthorized removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.</p> <p>(3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PPE, PFRS and PFAS.</p> <p>(4) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.</p> <p>2.5.13 Personal Protective Equipment for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:</p> <p>(1) The Contractor shall provide PFRS as follows:</p> <p>(a) PFRS shall be the same as PFAS specified below but designed to restrict the movement of workers and prevent them from reaching the edge and opening of any working area and therefore eliminating the risk of a fall.</p> <p>JC9: 9. 2.5.13(1)(a) に opening という言葉を加えています (2.5.9(1)の記述(端、開口部からの墜落防止の措置を取らなければならない、とするもの)の趣旨に合致すると思</p>	<p>direct the work based on the Safety Plan and perform the following duties:</p> <p>(a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;</p> <p>(b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;</p> <p>(c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFRS, PFAS and PPE; and</p> <p>(d) Ensure Contractor's Personnel use PFRS, PFAS correctly, and, have them fix the PFAS to the life lines.</p> <p>2.5.12 Further Measures for Contractor's Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including for example taking the following measures before any work commences:</p> <p>(1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.</p> <p>(2) Prohibit the unauthorized removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.</p> <p>(3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PPE, PFRS and PFAS.</p> <p>(4) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.</p> <p>2.5.13 Personal Protective Equipment for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:</p> <p>(1) The Contractor shall provide PFRS as follows:</p> <p>(a) PFRS shall be the same as PFAS specified below but designed to restrict the movement of workers and prevent them from reaching the edge and opening of any working area and therefore eliminating the risk of a fall.</p>	<p>from Falling Objects; by using covered passageways and PPE</p> <p>(5) The Contractor shall appoint an Operation Leader who shall work with the rope work team at all times throughout their assignment and direct the work based on the Safety Plan and perform the following duties:</p> <p>(a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;</p> <p>(b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;</p> <p>(c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFRS, PFAS and PPE; and</p> <p>(d) Ensure Contractor's Personnel use PFRS, FAS correctly, and, have them fix the PFAS to the life lines.</p> <p>2.5.12 Further Measures for Contractor's Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including, for example, taking the following measures before any work commences:</p> <p>(1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.</p> <p>(2) Prohibit the unauthorised removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.</p> <p>(3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PFRS, PFAS and PPE; and</p> <p>(4) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.</p> <p>2.5.13 PPE for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:</p> <p>(1) The Contractor shall provide PFRS as follows:</p> <p>(a) PFRS shall be the same as PFAS specified below but designed to restrict the movement of workers and prevent them from reaching the edge of or any</p>	<p>direct the work based on the Safety Plan and perform the following duties:</p> <p>(a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;</p> <p>(b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;</p> <p>(c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFRS, PFAS and PPE, and</p> <p>(d) Ensure Contractor's Personnel use PFRS, FAS correctly, and, have them fix the PFAS to the life lines.</p> <p>2.5.12 Further Measures for Contractor's Personnel</p> <p>The Contractor shall take all necessary further measures to prevent falls during the Works including, for example, taking the following measures before any work commences:</p> <p>(1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.</p> <p>(2) Prohibit the unauthorised removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.</p> <p>(3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PFRS, PFAS and PPE; and</p> <p>(4) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.</p> <p>2.5.13 PPE for Fall Prevention</p> <p>The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:</p> <p>(1) The Contractor shall provide PFRS as follows:</p> <p>(a) PFRS shall be the same as PFAS specified below but designed to restrict the movement of workers and prevent them from reaching the edge of or any openings in the working area and therefore eliminating the risk of a fall.</p>
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<p>います。</p> <p>2.5.13(1)(a): “opening” is added to meet the requirement that fall prevention measures shall be taken at the edge and opening specified in 2.5.9(1).</p> <p>JC: added as commented.</p> <p>(b) PPE for PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p> <p>JC: 不要. Not necessary.</p> <p>NK: Deleted.</p> <p>(2) The Contractor shall provide PFAS as follows:</p> <p>(a) The PFAS shall be the full harness type and shall comprise of a body harness, connectors, lanyard, deceleration device, lifeline, anchorage, or suitable combination of these.</p> <p>(b) The use of a Safety Belt for PFAS is prohibited except the case that if there is any risk of the Contractor's Personnel hitting the lower surface when the full harness type is used, the total fall clearance distance calculated as below is less than the distance between the point at which a worker would be anchored and any lower surface. The total fall clearance distance for PFAS with a shock-absorbing lanyard is calculated as the total of free fall distance, deceleration distance, D-ring shift, back D-ring height, and safety factor. (Refer to OSHA Technical Manual General Information, Section V: Chapter 4 Fall Protection in Construction, III. Measurements for Assessing Fall Hazards and Controls, A. Total Fall Clearance Distance for PFAS.)</p> <p>(c) PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself.</p> <p>(d) For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of anchored point, installed connector equipment, length of lanyard, etc.).</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Inspection of any safety equipment</p> <p>Before starting work for example using PFRS or PFAS, the systems and anchorages to which the</p>	<p>(b) PFRS shall comprise of either a Safety Belt or body harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p> <p>(2) The Contractor shall provide PFAS as follows:</p> <p>(a) The PFAS shall be the full harness type and shall comprise of a body harness, connectors, lanyard, deceleration device, lifeline, anchorage, or suitable combination of these.</p> <p>(b) The use of a Safety Belt for PFAS is prohibited except the case that if there is any risk of the Contractor's Personnel hitting the lower surface when the full harness type is used, the total fall clearance distance calculated as below is less than the distance between the point at which a worker would be anchored and any lower surface. The total fall clearance distance for PFAS with a shock-absorbing lanyard is calculated as the total of free fall distance, deceleration distance, D-ring shift, back D-ring height, and safety factor. (Refer to OSHA Technical Manual General Information, Section V: Chapter 4 Fall Protection in Construction, III. Measurements for Assessing Fall Hazards and Controls, A. Total Fall Clearance Distance for PFAS.)</p> <p>(c) PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself.</p> <p>(d) For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of anchored point, length of lanyard, etc.).</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Inspection of any safety equipment</p> <p>Before starting work for example using PFRS or PFAS, the systems and anchorages to which the</p>	<p>openings in the working area and therefore eliminating the risk of a fall.</p> <p><i>Safety Belt or Safety Harness are defined wording</i></p> <p>(b) PPE for PFRS shall comprise of either a Safety Belt or Safety Harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p> <p>(2) The Contractor shall provide PFAS as follows:</p> <p>(a) The PFAS shall be the full harness type and shall comprise of a body harness, connectors, lanyard, deceleration device, lifeline, anchorage, or suitable combination of these.</p> <p>(b) The use of a Safety Belt for PFAS is prohibited except where there is any risk of the Contractor's Personnel hitting the lower surface when the full harness type is used and the total fall clearance distance calculated as below, is less than the distance between the point at which a worker would be anchored and any lower level.</p> <p>(c) The total fall clearance distance for PFAS with a shock-absorbing lanyard is calculated as the total of free fall distance, deceleration distance, D-ring shift, back D-ring height, and safety factor. (Refer to OSHA Technical Manual General Information, Section V: Chapter 4 Fall Protection in Construction, III. Measurements for Assessing Fall Hazards and Controls, A. Total Fall Clearance Distance for PFAS.)</p> <p>(d) PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself.</p> <p>(e) For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of anchor point, length of lanyard, etc.).</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p>	<p>(b) PPE for PFRS shall comprise of either a Safety Belt or Safety Harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.</p> <p>(2) The Contractor shall provide PFAS as follows:</p> <p>(a) The PFAS shall be the full harness type and shall comprise of a body harness, connectors, lanyard, deceleration device, lifeline, anchorage, or suitable combination of these.</p> <p>(b) The use of a Safety Belt for PFAS is prohibited except where there is any risk of the Contractor's Personnel hitting the lower surface when the full harness type is used and the total fall clearance distance calculated as below, is less than the distance between the point at which a worker would be anchored and any lower level.</p> <p>(c) The total fall clearance distance for PFAS with a shock-absorbing lanyard is calculated as the total of free fall distance, deceleration distance, D-ring shift, back D-ring height, and safety factor. (Refer to OSHA Technical Manual General Information, Section V: Chapter 4 Fall Protection in Construction, III. Measurements for Assessing Fall Hazards and Controls, A. Total Fall Clearance Distance for PFAS.)</p> <p>(d) PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself.</p> <p>(e) For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of anchor point, length of lanyard, etc.).</p> <p>(3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.</p> <p>(4) Inspection of any safety equipment</p> <p>Before starting work using PFRS or PFAS, the systems and anchorages to which the systems</p>
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<p>systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.14 Portable Ladders and Stepladders</p> <p>For further requirements, refer to JSSS 7.4 [Walkways, Ladders and Stepladders]</p> <p>2.5.15 Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p> <p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p> <p>When working on, accessing or crossing, floor or roof areas (including uncompleted areas under construction), or fragile roofs such as those covered with slates, tiles or other non-loadbearing coverings or where there is any risk of breaking and or falling through such areas, the Contractor shall provide continuous bearing boards for workers to walk on, with a minimum width of 60 cm or sufficiently wider to provide safe transit and where necessary to spread the bearing load on the surface and avoid penetration. The boards shall be fixed together and secured to the underlying surface by tying with ropes or clips to prevent any movement.</p> <p>Unless otherwise approved by the HSO, handrails shall be provided to both sides.</p> <p>If the underlying surface or roofing is too fragile for such measures and access is required, the Contractor shall provide an independent scaffolding boarded walkway with handrails both sides, which does not bear upon the existing roof but that is supported independently by a scaffolding structure.</p> <p>(4) Demolition or Alteration of Buildings and Structures</p> <p>When carrying out demolition or alteration of buildings or structures and where there is a risk of fall for Contractor's Personnel, the Contractor shall take the following measures:</p> <p>(a) Appoint an Operation Leader to be engaged on the work;</p>	<p>systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.14 Portable Ladders and Stepladders</p> <p>For further requirements, refer to JSSS 7.4 [Walkways, Ladders and Stepladders]</p> <p>2.5.15 Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p> <p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p> <p>When working on, accessing or crossing, floor or roof areas (including uncompleted areas under construction), or fragile roofs such as those covered with slates, tiles or other non-loadbearing coverings or where there is any risk of breaking and or falling through such areas, the Contractor shall provide continuous bearing boards for workers to walk on, with a minimum width of 60 cm or sufficiently wider to provide safe transit and where necessary to spread the bearing load on the surface and avoid penetration. 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The boards shall be fixed together and secured to the underlying surface by tying with ropes or clips to prevent any movement.</p> <p>Unless otherwise approved by the HSO, handrails shall be provided to one or both sides.</p> <p>If the underlying surface or roofing is too fragile for such measures and access is required, the Contractor shall provide an independent scaffolding boarded walkway with handrails both sides, which does not bear upon the existing roof but that is supported independently by a scaffolding structure.</p> <p>(4) Demolition or Alteration of Buildings and Structures</p>	<p>are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.</p> <p>2.5.14 Portable Ladders and Stepladders</p> <p>For further requirements, refer to JSSS 6.4 [Walkways, Ladders and Stepladders]</p> <p>2.5.15 Work on Roofs and Other Areas</p> <p>(1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.</p> <p>(2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.</p> <p>(3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces</p> <p>When working on, accessing or crossing, floor or roof areas (including uncompleted areas under construction), or fragile roofs such as those covered with slates, tiles or other non-loadbearing coverings or where there is any risk of breaking and or falling through such areas, the Contractor shall provide continuous bearing boards for workers to walk on, with a minimum width of 60 cm or sufficiently wider to provide safe transit and where necessary to spread the bearing load on the surface and avoid penetration. 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<p>(b) Safely supervise the work; and</p> <p>(c) Inform and train Contractor's Personnel engaged in the said work so that they are aware in advance of the work methods and procedures</p> <p>2.5.16 Safety Nets</p> <p>(1) The Contractor shall provide safety nets when workplaces are more than 7.50m above the lower ground or water surface and where the use of another type of fall prevention system is impractical or has been removed.</p> <p>(2) Operations shall not be undertaken until the net is in place and has been inspected and tested.</p> <p>(3) Nets shall extend 2.5m beyond the edge of the work surface where Contractor's Personnel may be at risk and shall be installed as close under the working surface as practical but in no case more than 7.50m below such work surface.</p> <p>(4) Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.</p> <p>(5) The mesh size of nets shall not exceed 15 cm by 15 cm. All new nets shall bear a label of proof test from the manufacturer that they can withstand 23,700 Nm minimum impact resistance. Edge ropes shall provide a minimum breaking strength of 2,270kg.</p> <p>(6) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.</p>	<p>engaged on the work;</p> <p>(b) Safely supervise the work; and</p> <p>(c) Inform and train Contractor's Personnel engaged in the said work so that they are aware in advance of the work methods and procedures.</p> <p>2.5.16 Safety Nets</p> <p>(1) The Contractor shall provide safety nets when workplaces are more than 7.50m above the lower ground or water surface and where the use of another type of fall prevention system is impractical or has been removed.</p> <p>(2) Operations shall not be undertaken until the net is in place and has been inspected and tested.</p> <p>(3) Nets shall extend 2.5m beyond the edge of the work surface where Contractor's Personnel may be at risk and shall be installed as close under the working surface as practical but in no case more than 7.50m below such work surface.</p> <p>(4) Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. 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<p>2.6 FALLING OBJECTS</p> <p>2.6.1 General</p> <p>The Contactor shall take all necessary measures to</p>	<p>2.6 FALLING OBJECTS</p> <p>2.6.1 General</p>	<p>2.6 FALLING OBJECTS</p> <p>2.6.1 General</p> <p>To raise awareness (see earlier notes)</p> <p>Falling objects in particular falling tools, is a major cause of accident and fatalities.</p> <p>NK: As explained in 2.1.2 & 2.5, we will not state sentences "to raise awareness" here.</p> <p>The Contactor shall take all necessary measures to</p>	<p>2.6 FALLING OBJECTS</p> <p>2.6.1. General</p>

<p>avoid danger and prevent damage and injury to Contractor's Personnel, Employer's Personnel and any other persons including third parties that are on or adjacent to or in the vicinity of the Site whether connected with the Works or otherwise, and who may be at risk from Falling Objects.</p> <p>In general, this shall be accomplished by:</p> <ol style="list-style-type: none"> (1) Providing secure temporary barriers to prevent or capture Falling Objects, designed by the Contractor to be of sufficient strength to capture all Falling Objects without perforating and which, where necessary, shall be of an aesthetic design to be approved the Engineer. (2) Providing a safe means of raising and lowering Goods, tools, waste and debris (3) Providing an exclusion zone prohibiting persons and traffic from entering areas where Falling Objects could be a risk, including providing pedestrian and traffic diversions. The exclusion zone shall include the cases that it is extremely difficult to provide mesh sheets or toe-board due to the nature of the work, or mesh sheets or baseboards are temporarily removed. (4) Using PPE. (5) Providing coloured warning tape, barriers and signage warning of "DANGER FALLING OBJECTS" in addition to all other preventive measures. 	<p>The Contactor shall take all necessary measures to avoid danger and prevent damage and injury to Contractor's Personnel, Employer's Personnel and any other persons including third parties that are on or adjacent to or in the vicinity of the Site whether connected with the Works or otherwise, and who may be at risk from Falling Objects.</p> <p>In general, this shall be accomplished by:</p> <ol style="list-style-type: none"> (1) Providing secure temporary barriers to prevent or capture Falling Objects, designed by the Contractor to be of sufficient strength to capture all Falling Objects without perforating and which, where necessary, shall be of an aesthetic design to be approved the Engineer. 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(2) Providing a safe means of raising and lowering Goods, tools, waste and debris (3) Providing an exclusion zone with temporary barriers and all other necessary measures to prevent persons and traffic from entering areas where Falling Objects could be a risk, including providing pedestrian and traffic diversions. (4) Exclusion zone shall also be provided where protective mesh sheets or toeboard are not installed or where they are temporarily removed due to the nature of the work (5) Using PPE. 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<p>2.6.2 General Preventive Measures</p> <ol style="list-style-type: none"> (1) All horizontal boarded areas of scaffolding shall be provided with a substantial and continuous toe-board to all edges. (2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas. (3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or openings of external walls where there is no scaffolding. (4) Safe passageways with substantial secured roof, walls and floors sides shall also be provided over entrances and exits. (5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways passageways, footpaths and 	<p>2.6.2 General Preventive Measures</p> <ol style="list-style-type: none"> (1) All horizontal boarded areas of scaffolding shall be provided with a substantial and continuous toe-board to all edges. (2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas. (3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or openings of external walls where there is no scaffolding. (4) Safe passageways with secured roof, walls shall also be provided over entrances and exits. (5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working 	<p>2.6.2 General Preventive Measures</p> <ol style="list-style-type: none"> (1) All horizontal boarded areas of scaffolding shall be provided with substantial and continuous toeboards to all edges in accordance with JSSS 2.5.6 [Toeboards]. (2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas. (3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or openings of external walls where there is no scaffolding. (4) Safe passageways with secure roof and walls shall be provided over entrances and exits. <p>Fans may also apply to walkways so left in :</p> <p>NK: Agreed.</p> <ol style="list-style-type: none"> (5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways, passageways, footpaths and 	<p>2.6.2 General Preventive Measures</p> <ol style="list-style-type: none"> (1) All horizontal boarded areas of scaffolding shall be provided with substantial and continuous toeboards to all edges in accordance with JSSS 2.5.6 [Toeboards]. (2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas. (3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or openings of external walls where there is no scaffolding. (4) Safe passageways with secure roof and walls shall be provided over entrances and exits. (5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working

<p>roads, including those on areas beyond the Site boundary.</p> <p>(6) Protective roofs and covered walkways passageways shall be provided wherever there is a risk over working areas, walkways passageways, footpaths and roads.</p> <p>(7) All protective structures including roofs, canopies, safety fans, projecting shelves and covered walkways passageways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p> <p>(b) Sheet shall comply with BS 7955 or equivalent composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh</p>	<p>areas, passageways, footpaths and roads, including those on areas beyond the Site boundary.</p> <p>(6) Protective roofs and covered passageways shall be provided wherever there is a risk over working areas, passageways, footpaths and roads.</p> <p>(7) All protective structures including roofs, canopies, safety fans, projecting shelves and covered passageways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p> <p>(b) Sheet shall comply with BS 7955 or equivalent composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p>	<p>roads, including those on areas beyond the Site boundary.</p> <p>(6) Protective roofs shall be provided wherever there is a risk over working areas, passageways, footpaths and roads.</p> <p>(7) All protective structures including roofs, canopies, safety fans, projecting shelves over walkways and passageways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p> <p><i>There is no need to state "or equivalent" this is always deemed to included please refer to JSSS 1.4.7.</i></p> <p><i>NK: JSSS 1.4.7 mentions as below, so (b) is stipulated as below.</i></p> <p><i>1.4.7 Specified Standards and Regulations</i></p> <p><i>(2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer...</i></p> <p>(b) Sheet shall comply with BS 7955, composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and</p> <p>(f) If there are any Falling Objects on the mesh</p>	<p>areas, walkways, passageways, footpaths and roads, including those on areas beyond the Site boundary.</p> <p>(6) Protective roofs shall be provided wherever there is a risk over working areas, passageways, footpaths and roads.</p> <p>(7) All protective structures including roofs, canopies, safety fans, projecting shelves over walkways and passageways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.</p> <p>(8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.</p> <p>(9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.</p> <p>(10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.</p> <p>(11) Use and control of mesh sheets to prevent objects from falling shall be as follows;</p> <p>(a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;</p> <p>(b) Sheet shall comply with BS 7955, composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;</p> <p>(c) Sheets that are damaged or which contain any irregularity shall not be used;</p> <p>(d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;</p> <p>(e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; 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<p>sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p> <p>(12) When/Where (?)the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside (?)the Site boundary and where/when (?)there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>Note: To MD, please see JICA comments in other sheets and review the (12).</p> <p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs or covered walkways passageways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and place a Spotter to direct traffic and pedestrians.</p>	<p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p> <p>(12) When/Where (?)the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside (?)the Site boundary and where/when (?)there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all public and private authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>Note: as left.</p> <p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs or covered passageways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and place a Spotter to direct traffic and pedestrians.</p>	<p>sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p> <p><i>The following refers when work may be executed on or adjacent to the site boundary where there is a risk of falling object damage or injury upon neighbours, traffic, people and buildings outside the site boundary. It is therefore correct. "When" or "where" is basically the same, roads and footpaths are correct expressions for public roads or footpaths, maybe temporary walkways, passageways and fans etc may well be required outside the site boundary for which arrangements must be made by the contractor for his temporary works. I can see nothing wrong.</i></p> <p>(12) When the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside the Site boundary and where there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all relevant authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs over walkways, passageways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and placing a Spotter to direct traffic and pedestrians.</p> <p><i>Falling tools and other objects is a major cause of accident and fatalities. Tools are not covered in the text of JSSS in detail and I suggest the following.</i></p> <p><i>Although measures preventing workers from falling are now widely applied, the prevention of falling objects, especially tools, is not, yet it has overtaken falls as a major cause of fatalities. Actions should be taken as follows:</i></p> <p>NK: Though we think it is good to stipulate to avoid falling tools, it is too details and many requirements, so we selected for JSSS.</p> <p>2.6.3 Falling Tools and Equipment</p> <p>(1) The Contractor shall take appropriate measures</p>	<p>(f) If there are any Falling Objects on the mesh sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.</p> <p>(12) When the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside the Site boundary and where there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all relevant authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:</p> <p>(a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs over walkways, passageways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and</p> <p>(b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and placing a Spotter to direct traffic and pedestrians.</p> <p>2.6.3 Falling Tools and Equipment</p>
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<p>2.6.3 Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p> <p>(a) Enclose areas where such operations are taking place, and provide protective screens or cover on storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.2 [Inspection, Maintenance and Repair] for grinding work equipment condition, use of protective covers and procedures for preventing danger due to tool breakage etc. and,</p>	<p>2.6.3 Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p> <p>(a) Enclose areas where such operations are taking place, and provide protective screens or cover on storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.2 [Inspection, Maintenance and Repair] for grinding work equipment condition, use of protective covers and procedures for</p>	<p>to avoid the risk of injury or damage arising from dropped or falling tools including for example the following:</p> <p>(a) Securing tools and materials.</p> <p>(b) Use tool holsters, pouches, lanyards, etc.</p> <p>(c) Use debris nets, catch platforms or canopies to catch or deflect falling tools.</p> <p>(d) Use tethered tools, either with built-in connection points placed by the manufacturer or retrofitted connection points and connect tools to a lanyard.</p> <p>Tools either can be connected to a worker through a tool belt, harness or wristband, or anchored to a fixed structure.</p> <p>Tools weighing more than five pounds should never be tethered to a person.</p> <p>(e) If a worker has a tool attached to him and needs to pass it off to a colleague, that colleague can connect to the tool before the passing worker disconnects from it, ensuring the tool is 100 percent tied off and never has the opportunity to become a drop hazard.</p> <p>(f) Workers should be trained on the use of tethered tools.</p> <p>(g) As a best practice, workers at height should only bring up the tools they need to do their job.</p> <p>(h) Carefully hoist up tools in suitable containers and with suitable tethering, ensuring that items do not slip out.</p> <p>2.6.4 Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p> <p>(a) Enclose areas where such operations are taking place and provide protective screens or covers on storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.2.2 [Defects and Repair During Operation] for small tools including equipment condition, use of covers and safety guards and procedures for preventing danger due to tool breakage etc. and,</p>	<p>(1) The Contractor shall take appropriate measures to avoid the risk of injury or damage arising from dropped or falling tools including for example the following:</p> <p>(a) Use tool holsters, pouches, lanyards, etc.</p> <p>(b) Use debris nets, catch platforms or canopies to catch or deflect falling tools.</p> <p>(c) Use tethered tools, either with built-in connection points placed by the manufacturer or retrofitted connection points and connect tools to a lanyard.</p> <p>Tools either can be connected to a worker through a tool belt, harness or wristband, or anchored to a fixed structure.</p> <p>(d) Carefully hoist up tools in suitable containers and with suitable tethering, ensuring that items do not slip out.</p> <p>2.6.4 Preventive Measures against Dust and Windblown Debris</p> <p>(1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:</p> <p>(a) Enclose areas where such operations are taking place and provide protective screens or covers on storage areas;</p> <p>(b) Comply with the provisions of JSSS 4.2.2 [Defects and Repair During Operation] for small tools including equipment condition, use of covers and safety guards and</p>
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<p>(c) Ensure that workers use appropriate PPE such as head, face and eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [<i>Measures against Strong Wind and Storms</i>] in this Specification.</p> <p>2.6.4 Preventive Measures against Dropping Objects</p> <p>(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. scaffolding clips), generally and in no event from heights of 3m or above.</p> <p>(2) The Contractor shall use a crane to bring objects down from height of 3m or above. Alternatively, the Contractor may provide enclosed chutes to bring down objects and in such a case, in addition, shall prohibit entry to the chute area or assign a Spotter.</p> <p>JC10: 2.6.4(2): in addition よりも In such a case の方がふさわしいと思われ、その旨修正しています。</p> <p>2.6.4(2): It is revised because JC considers "In such a case" is more suitable than "in addition".</p> <p>NK: revised as commented.</p> <p>(3) Chutes shall be designed to prevent objects being scattered over a wide surrounding area.</p> <p>2.6.5 Prevention of Accumulation of Goods at High Levels Height</p> <p>(1) The Contractor shall prohibit the accumulation and storage of Goods at height particularly on scaffolding and steel platforms frames under assembling and in any event (?) in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.</p> <p>(2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.</p> <p>(3) When temporarily stored at height, Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.</p> <p>(4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.6 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully</p>	<p>preventing danger due to tool breakage etc. and,</p> <p>(c) Ensure that workers use appropriate PPE such as head, face and eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.4 [<i>Measures against Strong Wind and Storms</i>].</p> <p>2.6.4 Preventive Measures against Dropping Objects</p> <p>(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. scaffolding clips), generally and in no event from heights of 3m or above.</p> <p>(2) The Contractor shall use a crane to bring objects down from height of 3m or above. Alternatively, the Contractor may provide enclosed chutes to bring down objects and in such a case shall prohibit entry to the chute area or assign a Spotter.</p> <p>(3) Chutes shall be designed to prevent objects being scattered over a surrounding area.</p> <p>2.6.5 Prevention of Accumulation of Goods at Height</p> <p>(4) The Contractor shall prohibit the accumulation and storage of Goods at height particularly on scaffolding and steel platforms frames under assembling and in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.</p> <p>(5) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.</p> <p>(6) When temporarily stored at height, Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.</p> <p>(7) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.6 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working</p>	<p>(c) Ensure that workers use appropriate PPE such as head, face and eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.3 [<i>Measures against Strong Wind and Storms</i>].</p> <p>2.6.5 Preventive Measures against Dropping Objects</p> <p>(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. Scaffolding clips), generally and in no event from heights of 3m or above.</p> <p>(2) The Contractor shall use a crane to bring objects down from heights of 3m or above. Alternatively, the Contractor may provide enclosed chutes to bring down objects and in addition, shall prohibit entry to the chute area or assign a Spotter.</p> <p>(3) Chutes shall be designed to prevent objects being scattered over the surrounding area.</p> <p>(4) The Contractor shall adjust the distance between the chute tip and the ground by arranging the chute length and gradient so that the objects do not scatter.</p> <p>NK: (4) is included in (3), so not added here.</p> <p>2.6.6 Prevention of Accumulation of Goods at Height</p> <p>(3) The Contractor shall prohibit the accumulation and storage of Goods at high levels particularly on scaffolding and in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.</p> <p>(4) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.</p> <p>(5) When temporarily stored at height, Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.</p> <p>(6) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.7 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To</p>	<p>procedures for preventing danger due to tool breakage etc. and,</p> <p>(c) Ensure that workers use appropriate PPE such as head, face and eye protection to prevent accident or injury.</p> <p>(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.3 [<i>Measures against Strong Wind and Storms</i>].</p> <p>2.6.5 Preventive Measures against Dropping Objects</p> <p>(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. Scaffolding clips), generally and in no event from heights of 3m or above.</p> <p>(2) The Contractor shall use a crane to bring objects down from heights of 3m or above. Alternatively, the Contractor may provide enclosed chutes to bring down objects and in addition, shall prohibit entry to the chute area or assign a Spotter.</p> <p>(3) Chutes shall be designed to prevent objects being scattered over the surrounding area.</p> <p>2.6.6 Prevention of Accumulation of Goods at Height</p> <p>(3) The Contractor shall prohibit the accumulation and storage of Goods at high levels particularly on scaffolding and in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.</p> <p>(4) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.</p> <p>(5) When temporarily stored at height, Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.</p> <p>(6) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.</p> <p>2.6.7 Working Above or Below Others</p> <p>(1) As a general and prevailing rule, the Contractor</p>
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<p>coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>	<p>concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p>	<p>achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p> <p>2.6.8 Loose Rock, Boulders and the Like</p> <p>NK: The stipulation below is moved from 7. Excavation Works.</p> <p>(1) If loose rock, boulders, trees and the like, are positioned above working areas and where there is any risk that these may pose a danger to Contractor's Personnel or Contractor's Equipment working below, unless otherwise instructed by the Engineer, the Contractor shall carefully remove such items and if necessary:</p> <p>(a) Propose further safety measures to the Engineer;</p> <p>(b) Consult with the Engineer and obtain the Engineer's Instructions for the required further measures to be taken, such as installation of temporary protective barriers; and</p> <p>(c) Prohibiting Contractor's Personnel from entering the working areas until the above items have been removed or the further measures have been taken.</p>	<p>shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.</p> <p>(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.</p> <p>2.6.8 Loose Rock, Boulders and the Like</p> <p>If loose rock, boulders, trees and the like, are positioned above working areas and where there is any risk that these may pose a danger to Contractor's Personnel or Contractor's Equipment working below, unless otherwise instructed by the Engineer, the Contractor shall carefully remove such items and if necessary:</p> <p>(1) Propose further safety measures to the Engineer;</p> <p>(2) Consult with the Engineer and obtain the Engineer's Instructions for the required further measures to be taken, such as installation of temporary protective barriers; and</p> <p>(3) Prohibiting Contractor's Personnel from entering the working areas until the above items have been removed or the further measures have been taken.</p>
<p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1 General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(2) Adverse climatic conditions and other conditions described in this Section are deemed to be foreseeable conditions within the Contractor's control and they shall not be construed as automatically constituting a cause of delay giving any entitlement to extension of time under GC 8.4 [Extension of Time for</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p>2.7.1 General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor shall provide the additional preventive measures described in this Section.</p> <p>(2) Adverse climatic conditions and other conditions described in this Section shall not be construed as automatically constituting a cause of delay giving any entitlement to extension of time under GC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS</p> <p><i>NK I have considered the following carefully and given that we have now deleted the idea of specifying standard data to determine what is excessive or not, changed the heading and the detail, I now think that the potential risk of conflict with the contract is minimal or zero.</i></p> <p><i>Accordingly, I now consider that the following clause 2.7.1 can be deleted, thereby making this Section much simpler.</i></p> <p>NK: agreed to MD's proposal.</p> <p>2.7.1 General</p> <p>(1) Further to the requirements of JSSS 1.23 [Emergency Response Plan] the Contractor</p>	<p>2.7 ADVERSE WEATHER REQUIREMENTS</p>

<p>Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's obligations or entitlements under the Contract.</p> <p>JC: weather conditions は foreseeable かもしれませんが、within the Contractor's control になるものではありません。 Weather conditions may be foreseeable, however, they are not within the Contractor's control.</p> <p>JC11: 2.7.1(2): 悪天候に関する記述ですが、「foreseeable で EOT 等につながるものではない」と言い切ることは不適当です。修正しています。</p> <p>2.7.1(2): It is inappropriate to affirm "they shall not be construed as constituting a cause of delay giving any entitlement to extension of time under GC". Therefore, revision is made as above.</p> <p>NK: Issue 6 and JICA revised sentences</p> <p>Issue 6: (4) Adverse climatic conditions and other conditions described in this Section are deemed to be <u>foreseeable conditions within the Contractors control</u> and they shall not be construed as constituting a cause of delay giving any entitlement to extension of time under GC 8.4...</p> <p>本節で規定する悪天候は、請負者がコントロールできる予測可能なものであり、工期延長の理由になると解釈されるべきではない。</p> <p>JICA revised : Adverse climatic conditions and other conditions described in this Section shall not be construed as <u>automatically</u> constituting a cause of delay giving any entitlement to extension of time under GC 8.4...</p> <p>本節で規定する悪天候は、自動的に工期延長の理由になると解釈されるべきではない。</p> <p>NK3/14: The Contractor shall take measures specified in 2.7 for the both adverse climatic conditions and exceptionally adverse climatic conditions.</p> <p>SS considers that we can foresee the both conditions technically by the Contractor, for example, rainfall of 100 years, 1000 years return period and probable maximum rainfall.</p> <p>The boundary between exceptionally adverse climatic conditions and adverse climatic conditions is difficult to discuss here.</p> <p>NK3/14: Agreed to JICA revision.</p> <p>2.7.2 Preventive Measures</p> <p>(1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.</p> <p>(2) During or after adverse climatic conditions, the Contractor shall:</p> <p>(a) Stop work at heights if there is any danger of</p>	<p>or prejudice the Contractor's obligations or entitlements under the Contract.</p> <p>To MD: I discussed JICA's comment on (2) with Mr Hayashi and want to revise as JICA revised. Please review the above and modify the sentence of JICA.</p> <p>2.7.2 Preventive Measures</p> <p>(1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.</p> <p>(2) During or after adverse climatic conditions, the Contractor shall:</p> <p>(a) Stop work at heights if there is any danger of</p>	<p>shall provide the additional preventive measures described in this Section.</p> <p>Adverse climatic conditions and other conditions described in this Section are deemed to be foreseeable conditions within the Contractors control and they shall not be construed as constituting a cause of delay giving any entitlement to extension of time under GCC 8.4 [Extension of Time for Completion] or any other clause of the Contract. The requirements of this Section shall not affect or prejudice the Contractor's obligations or entitlements under the Contract.</p> <p>2.7.1 Preventive Measures</p> <p>(1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.</p> <p>(2) Before, during or after adverse climatic conditions, the Contractor shall:</p>	<p>2.7.1 Preventive Measures</p> <p>(1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.</p> <p>(2) Before, during or after adverse climatic conditions, the Contractor shall:</p>
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<p>falling;</p> <p>(b) Stop work if there is a possibility of that such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;</p> <p>(c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [Prohibition of Entry – Dangerous Work], inform the Engineer accordingly and request his instructions; and</p> <p>(d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor’s Equipment and Temporary Works only after making the necessary repairs.</p>	<p>falling;</p> <p>(b) Stop work if there is a possibility of that such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;</p> <p>(c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [Prohibition of Entry – Dangerous Work], inform the Engineer accordingly and request his instructions; and</p> <p>(d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor’s Equipment and Temporary Works only after making the necessary repairs.</p>	<p>(a) Stop work at heights if there is any danger of falling;</p> <p>(b) Stop work if there is a possibility of that such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;</p> <p>(c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS エラー! 参照元が見つかりません。 [Prohibition of Entry – Dangerous Work], inform the Engineer accordingly and request his instructions; and</p> <p>(d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor’s Equipment and Temporary Works only after making the necessary repairs or replacement.</p>	<p>(a) Stop work at heights if there is any danger of falling;</p> <p>(b) Stop work if there is a possibility of that such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;</p> <p>(c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS エラー! 参照元が見つかりません。 [Prohibition of Entry – Dangerous Work], inform the Engineer accordingly and request his instructions; and</p> <p>(d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor’s Equipment and Temporary Works only after making the necessary repairs or replacement.</p>
<p>2.7.3 Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prohibit entry in accordance with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations:</p> <p>(a) Places where Landslides could be anticipated;</p> <p>(b) Places where there is a risk of flow of material and equipment and soil runoff; and</p> <p>(c) Places where there is a risk of damage due to flash floods, lake or river flooding.</p> <p>(2) Take measures such as evacuation of Contractor’s Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.</p> <p>(3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.</p> <p>2.7.4 Measures for Strong Wind and Storms</p>	<p>2.7.3. Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prohibit entry in accordance with JSSS 2.3 [<i>Prohibition of Entry – Dangerous Work</i>] at the following locations:</p> <p>(a) Places where Landslides could be anticipated;</p> <p>(b) Places where there is a risk of flow of material and equipment and soil runoff; and</p> <p>(c) Places where there is a risk of damage due to flash floods, lake or river flooding.</p> <p>(2) Take measures such as evacuation of Contractor’s Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.</p> <p>(3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.</p> <p>2.7.4 Measures for Strong Wind and Storms</p>	<p>2.7.2 Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prohibit entry in accordance with JSSS エラー! 参照元が見つかりません。 [Prohibition of Entry – Dangerous Work] at the following locations:</p> <p>(a) Places where landslides could be anticipated;</p> <p>(b) Places where there is a risk of flow of material and equipment and soil runoff; and</p> <p>(c) Places where there is a risk of damage due to flash floods, lake or river flooding.</p> <p>(2) Take measures such as evacuation of Contractor’s Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.</p> <p>(3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.</p>	<p>2.7.2 Measures for Heavy Rain</p> <p>For heavy rainfall at the Site and the surrounding area, the Contractor shall:</p> <p>(1) Take measures to prohibit entry in accordance with JSSS エラー! 参照元が見つかりません。 [Prohibition of Entry – Dangerous Work] at the following locations:</p> <p>(a) Places where landslides could be anticipated;</p> <p>(b) Places where there is a risk of flow of material and equipment and soil runoff; and</p> <p>(c) Places where there is a risk of damage due to flash floods, lake or river flooding.</p> <p>(2) Take measures such as evacuation of Contractor’s Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.</p> <p>(3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.</p>

<p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prevent collapse, overturn or movement of Contractor's Equipment particularly cranes and pile drivers. (2) Always store and/or if necessary, evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury. (3) Take the following measures for scaffolding and working platforms. <ol style="list-style-type: none"> (a) Remove or furl mesh sheets to reduce wind load; (b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors; (c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and (d) Securing Goods on scaffolding, or lowering them to ground level. (4) Discontinue work at in elevated places; and (5) Take measures to prevent scattering of Goods, waste and debris. 	<p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prevent collapse, overturn or movement of Contractor's Equipment particularly cranes and pile drivers. (2) Always store and/or if necessary, evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury. (3) Take the following measures for scaffolding and working platforms. <ol style="list-style-type: none"> (a) Remove or furl mesh sheets to reduce wind load; (b) Prevent scaffolding from collapsing or sliding by adding or reinforcing wall connectors; (c) Reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and (d) Securing Goods on scaffolding, or lowering them to ground level. (4) Discontinue work at in elevated places; and (5) Take measures to prevent scattering of Goods, waste and debris. 	<p>2.7.3 Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prevent capsizes, overturn or movement of Contractor's Equipment particularly high equipment such as cranes, pile drivers, pile drilling rigs and the like. Where possible, lower the boom of high equipment and tie to a secure anchor with steel cable to ensure stability and prevent any risk of overturning. (2) Always store and/or if necessary, evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury. (3) Take the following measures for scaffolding and working platforms. <ol style="list-style-type: none"> (a) Remove or furl mesh sheets to reduce wind load; (b) Prevent scaffolding from collapsing or sliding by dismantling scaffolding or adding or reinforcing wall connectors; (c) Dismantle or reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and (d) Securing Goods on scaffolding, or lowering them to ground level. (4) Discontinue work at l elevated places; and (5) Take measures to prevent scattering of Goods, waste and debris. <p>NK: Object of "dismantling" is added.</p>	<p>2.7.3 Measures for Strong Wind and Storms</p> <p>For strong wind and storms at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take measures to prevent capsizes, overturn or movement of Contractor's Equipment particularly high equipment such as cranes, pile drivers, pile drilling rigs and the like. Where possible, lower the boom of high equipment and tie to a secure anchor with steel cable to ensure stability and prevent any risk of overturning. (2) Always store and/or if necessary, evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury. (3) Take the following measures for scaffolding and working platforms. <ol style="list-style-type: none"> (a) Remove or furl mesh sheets to reduce wind load; (b) Prevent scaffolding from collapsing or sliding by dismantling scaffolding or adding or reinforcing wall connectors; (c) Dismantle or reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and (d) Securing Goods on scaffolding, or lowering them to ground level. (4) Discontinue work at elevated places; and (5) Take measures to prevent scattering of Goods, waste and debris.
<p>2.7.5 Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways. (2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like. (3) Remove snow from roofs, canopies and signs, notice boards. (4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal. 	<p>2.7.5. Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take fall prevention measures in snow such as setting of poles, red flags to demarcate roads, footpaths and waterways. (2) Take fall prevention measures for workers in icy conditions or snow by snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like. (3) Remove snow from roofs, canopies and signs, notice boards. (4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except its careful removal. 	<p>2.7.4 Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take fall prevention measures in snow such as setting of poles or red flags to demarcate roads, footpaths and waterways. (2) Take fall prevention measures for workers in icy conditions or snow, by ice or snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like. (3) Remove snow from roofs, canopies and signs, notice boards. (4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except after its careful removal. 	<p>2.7.4 Measures for Heavy Snow and Ice</p> <p>For heavy snow or ice at the Site and the surrounding area, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Take fall prevention measures in snow such as setting of poles or red flags to demarcate roads, footpaths and waterways. (2) Take fall prevention measures for workers in icy conditions or snow, by ice or snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like. (3) Remove snow from roofs, canopies and signs, notice boards. (4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except after its careful removal.

<p>2.7.6 Measures for Lightning</p> <p>(1) When thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(2) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p>	<p>2.7.6 Measures for Lightning</p> <p>(1) When thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(2) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p>	<p>2.7.5 Measures for Lightning</p> <p><i>This is for improving awareness as noted above:</i></p> <p>(1) Lightning is a serious occupational hazard and outside work on or near tall objects, or near explosives or conductive materials have significant risks.</p> <p><i>This is not a general reference, it is a specific and helpful document that could be helpful:</i></p> <p>NK: We want to specify this as special requirements as we drafted here.</p> <p>Where there is risk of lightning at outside work on or near tall objects, or near explosives or conductive materials, the Contractor shall take the safety measures stipulated below.</p> <p>(2) The Contractor shall follow the recommendations of OSHA as described in their Fact Sheet [refer to https://www.osha.gov/Publications/OSHA3863.pdf] and when thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(3) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p>	<p>2.7.5 Measures for Lightning</p> <p>Where there is risk of lightning at outside work on or near tall objects, or near explosives or conductive materials, the Contractor shall take the safety measures stipulated below.</p> <p>(1) The Contractor shall follow the recommendations of OSHA as described in their Fact Sheet [refer to https://www.osha.gov/Publications/OSHA3863.pdf] and when thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).</p> <p>(2) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.</p>
<p>2.7.7 Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event of earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p>	<p>2.7.7. Measures for Earthquake and Tsunami</p> <p>To the extent that time and forewarning is available, the Contractor shall evacuate workers to the predetermined safe place in the event of earthquakes and tsunamis when the relevant public authority issue a warning for the occurrence or prediction of earthquakes or tsunamis.</p>	<p>2.7.6 Measures for Earthquake and Tsunami</p> <p>To the extent that time is available and forewarning is given, the Contractor shall evacuate workers to the designated meeting place in the event of earthquakes or tsunamis when the relevant authority issues a warning for the occurrence or prediction of earthquakes or tsunamis.</p>	<p>2.7.6 Measures for Earthquake and Tsunami</p> <p>To the extent that time is available and forewarning is given, the Contractor shall evacuate workers to the designated meeting place in the event of earthquakes or tsunamis when the relevant authority issues a warning for the occurrence or prediction of earthquakes or tsunamis.</p>
<p>2.7.8 Inspection of TW after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <p>(1) Perform a visual inspection as specified in JSSS 7.1.3 [Inspection and Monitoring]</p> <p>(2) Check all measured values of any instruments to ensure the safety of TW. When abnormality is found in instruments, recalibrate and or replace them as necessary.</p>	<p>2.7.8. Inspection of TW after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather, after any earthquake and before re-commencing any work, the Contractor shall:</p> <p>(1) Perform a visual inspection as specified in JSSS 7.1.3 [Inspection and Monitoring]</p> <p>(2) Check all measured values of any instruments to ensure the safety of TW. When abnormality is found in instruments, recalibrate and or replace them.</p>	<p>2.7.7 Inspection of Temporary Works after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather or after any earthquake and before re-commencing any work, the Contractor shall:</p> <p>(1) Perform a visual inspection as specified in JSSS 6.1.3 [Inspection and Monitoring of Temporary Works]</p> <p>(2) Check all measured values of any instruments to ensure the safety of Temporary Works.</p>	<p>2.7.7 Inspection of Temporary Works after Adverse Weather and Earthquake</p> <p>Following the occurrence of any adverse weather or after any earthquake and before re-commencing any work, the Contractor shall:</p> <p>(1) Perform a visual inspection as specified in JSSS 6.1.3 [Inspection and Monitoring of Temporary Works]</p> <p>(2) Check all measured values of any instruments to ensure the safety of Temporary Works.</p> <p>(3) When abnormality is found in instruments,</p>

<p>(3) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary.</p> <p>(4) Keep the Engineer informed of inspection and monitoring results of TW.</p>	<p>(3) If any damage or fault is found in the TW, immediately carry repair, replacement and reinforcement works as necessary.</p> <p>(4) Keep the Engineer informed of inspection and monitoring results of TW.</p>	<p>(3) When abnormality is found in instruments, recalibrate or replace them.</p> <p>(4) If any damage or fault is found in the TW, immediately carry out repair, replacement and/or reinforcement works, as necessary.</p> <p>(5) Keep the Engineer informed of inspection and monitoring results.</p>	<p>recalibrate or replace them.</p> <p>(4) If any damage or fault is found in the TW, immediately carry out repair, replacement and/or reinforcement works, as necessary.</p> <p>(5) Keep the Engineer informed of inspection and monitoring results.</p>
<p>2.8 FIRE PREVENTION</p> <p>2.8.1 General</p> <p>The Contractor shall provide the fire preventive measures described in this Section.</p> <p>2.8.2 Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required in the Contract), temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as "temporary facilities" in this Section).</p> <p>For this purpose, the Contractor shall:</p> <p>(1) Prepare a firefighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan.</p> <p>(2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire.</p> <p>(3) Prepare a firefighting training plan as a part of the firefighting plan.</p> <p>(4) Carry out all training and keep records of such training in accordance with JSSS 1.17.5 [Records of Education and Training].</p> <p>2.8.3 Measures of Fire Prevention and Firefighting</p> <p>For fire prevention and firefighting in the temporary</p>	<p>2.8 FIRE PREVENTION</p> <p>2.8.1 General</p> <p>The Contractor shall provide the fire preventive measures described in this Section.</p> <p>2.8.2 Temporary Facilities - Firefighting System</p> <p>The Contractor shall establish a fire-fighting system for the Contractor's offices, site offices and accommodation for the Employer and Engineer (if required in the Contract), temporary buildings, temporary facilities, dormitory, temporary construction structures, the Permanent Works whilst under construction and the like (hereinafter collectively referred to as "temporary facilities" in this Section).</p> <p>For this purpose, the Contractor shall:</p> <p>(1) Prepare a firefighting plan for the temporary facilities covering all requirements of this Section and include this as a part of the Safety Plan.</p> <p>(2) Designate a person responsible for fire-fighting and also evacuation in the event of a fire.</p> <p>(3) Prepare a firefighting training plan as a part of the firefighting plan.</p> <p>(4) Carry out all training and keep records of such training in accordance with JSSS 1.17.5 [Records of Education and Training].</p> <p>2.8.3 Measures of Fire Prevention and Firefighting</p> <p>For fire prevention and firefighting in the temporary facilities, the Contractor shall:</p>	<p>2.8 FIRE PREVENTION</p> <p><i>I have deleted the original Fire Prevention Clause from Chapter 1 with the intention of transferring here.</i></p> <p><i>I have reviewed and edited the content of this Section to include all relevant information here.</i></p> <p><i>There is no need now for the additional transferred clause added to the JICA draft.</i></p> <p><i>The User Guide will include suitable further requirements.</i></p> <p>2.8.1 Fire Prevention and Firefighting Facilities</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall take measures and provide facilities for fire prevention and fire-fighting and shall ensure that such measures are readily available and at all times at the Site and at any offices and accommodation for Contractor's and Employer's Personnel.</p> <p>(1) Fire Response Plan:</p> <p>The Contractor shall:</p> <p>(a) Prepare a Fire Response Plan detailing the proposed fire prevention and fire-fighting measures and facilities and include this as a part of the Safety Plan.</p> <p>(b) Designate a person (or persons) responsible for fire prevention, fire-fighting and also for evacuation in the event of a fire.</p> <p>(c) Prepare a firefighting training plan as a part of the fire prevention and fire-fighting plan.</p> <p>(d) Carry out all training and keep records of such training in accordance with JSSS 1.20.5 [Records of Education and Training].</p> <p>(2) Fire Response Measures and Facilities:</p> <p>The Contractor shall:</p> <p>(a) Provide fire hoses, hose-reels, fire</p>	<p>2.8 FIRE PREVENTION</p> <p>2.8.1 Fire Prevention and Firefighting Facilities</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall take measures and provide facilities for fire prevention and fire-fighting and shall ensure that such measures are readily available and at all times at the Site and at any offices and accommodation for Contractor's and Employer's Personnel.</p> <p>(1) Fire Response Plan:</p> <p>The Contractor shall:</p> <p>(a) Prepare a Fire Response Plan detailing the proposed fire prevention and fire-fighting measures and facilities and include this as a part of the Safety Plan.</p> <p>(b) Designate a person (or persons) responsible for fire prevention, fire-fighting and also for evacuation in the event of a fire.</p> <p>(c) Prepare a firefighting training plan as a part of the fire prevention and fire-fighting plan.</p> <p>(d) Carry out all training and keep records of such training in accordance with JSSS 1.20.5 [Records of Education and Training].</p> <p>(2) Fire Response Measures and Facilities:</p> <p>The Contractor shall:</p> <p>(a) Provide fire hoses, hose-reels, fire</p>

<p>facilities, the Contractor shall:</p> <p>(1) Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking areas.</p> <p>(2) Provide fire extinguishers and if necessary, fire hydrants with temporary water supply.</p> <p>(3) Different types of fire extinguishers shall be provided according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like.</p> <p>(4) Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer.</p> <p>(5) Train Contractor's Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available) otherwise provide the services required by JSSS 1.22 [Fire Prevention].</p> <p>2.8.4 Measures of Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p> <p>(1) Creating an evacuation route map if necessary and post this in easy-to-see places.</p> <p>(2) Display the evacuation route as necessary at the work places.</p> <p>(3) Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work.</p> <p>(4) Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire.</p> <p>2.8.5 Management of Flammable and Combustible Materials</p>	<p>(1) Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking areas.</p> <p>(2) Provide fire extinguishers and if necessary, fire hydrants with temporary water supply.</p> <p>(3) Different types of fire extinguishers shall be provided according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like.</p> <p>(4) Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer.</p> <p>(5) Train Contractor's Personnel and ensure that they respond in the event of a fire, in advance of attendance by the public firefighting service (if this is available).</p> <p>2.8.4 Measures of Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p> <p>(1) Creating an evacuation route map if necessary and post this in easy-to-see places.</p> <p>(2) Display the evacuation route as necessary at the work places.</p> <p>(3) Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work.</p> <p>(4) Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire.</p> <p>2.8.5. Management of Flammable and Combustible Materials</p>	<p>hydrants and other necessary equipment, if necessary;</p> <p>NK: (2) in Issue 2 mentioned "if necessary, fire hydrants...". The fire hoses, hose-reels, fire hydrants cannot be provided at all sites, therefore the addition of "if necessary" is made.</p> <p>(b) Ensure that an adequate temporary water supply is available as and when required.</p> <p>(c) Provide fire extinguishers and fire blankets according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like.</p> <p>Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer.</p> <p>(d) Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking and other dangerous areas.</p> <p>2.8.2 Fire Training</p> <p>The Contractor shall train Contractors Personnel and ensure that a team or teams is available to respond in the event of a fire and in advance or in place of attendance by any public firefighting service.</p> <p>2.8.3 Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p> <p>(1) Creating an evacuation route map if necessary and post this in easy-to-see places.</p> <p>(2) Display the evacuation routes as necessary at all work places.</p> <p>(3) Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work.</p> <p>(4) Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire.</p> <p>2.8.4 Management of Flammable and Combustible Materials</p>	<p>hydrants and other necessary equipment, if necessary;</p> <p>(b) Ensure that an adequate temporary water supply is available as and when required.</p> <p>(c) Provide fire extinguishers and fire blankets according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like.</p> <p>Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer.</p> <p>(d) Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking and other dangerous areas.</p> <p>2.8.2 Fire Training</p> <p>The Contractor shall train Contractors Personnel and ensure that a team or teams is available to respond in the event of a fire and in advance or in place of attendance by any public firefighting service.</p> <p>2.8.3 Measures for Evacuation</p> <p>In the event of a fire, the Contractor shall facilitate evacuation by:</p> <p>(1) Creating an evacuation route map if necessary and post this in easy-to-see places.</p> <p>(2) Display the evacuation routes as necessary at all work places.</p> <p>(3) Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work.</p> <p>(4) Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire.</p> <p>2.8.4 Management of Flammable and Combustible Materials</p>
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<p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures referring to comply with the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage</p>	<p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures referring to the technical requirements of OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and combustible materials or 1926. 153 Liquefied</p>	<p><i>There is a request to change the following standard wording to change “complying with” to “referring to”.</i></p> <p><i>I recommend that this is not done because:</i></p> <ol style="list-style-type: none"> <i>1) This is a standard description that has been used consistently in many places throughout JSSS.</i> <i>2) It has already been commented by JICA and changed throughout to this standard and we agree that JICA original comment including “complying with” is an improvement.</i> <i>3) “Referring to” has no meaning in a contractual or practical sense.</i> <p><i>I do not understand why this is a problem but please clarify and if there is another standard please advise.</i></p> <p><i>I have added the expression, “ unless otherwise approved by the Engineer” but this is perhaps of little value.</i></p> <p>NK: We discussed this in the comments to issue 2 as follows and proposed to replace “referring to”.</p> <p>JC: OSHA の関連規定、ここで言及するのが適切か再確認願います。</p> <p>Please re-confirm if referring to relevant provisions of OSHA is appropriate here or not.</p> <p>NK: Stipulation of complying with OSHA will impose the Contractor difficult obligations for storing even small amount of fuel, etc. It is considered appropriate to revise this part as right from “comply with” to “referring to”.</p> <p>NK(6/1) Chapter 1 mentioned as follows:</p> <p><i>1.4 Compliance with JSSS and Other Regulations</i> <i>1.4.5 Specified Standards and Regulations</i> <i>(2) Any reference standard or regulation specified in JSSS may be substituted with an equivalent alternative which, unless stated otherwise, shall mean that an alternative is acceptable but only after the Contractor has submitted a formal request with supporting particulars to the Engineer and has obtained the consent of the Engineer who shall give such consent only if, in his opinion, the alternative is internationally acceptable and that it provides an equivalent or higher standard than the standard or regulation specified.</i> <i>(3) Application of detailed parts of any standards or regulations specified in JSSS may be waived at the formal request of the Contractor, only if the Contractor justifies with supporting particulars that those detailed parts are not relevant to the Contract and the Engineer gives his consent to such Contractor's request.</i></p> <p>The Contractor can propose alternative when the requirement is not relevant to the Contract. If there is problem at the Site by the OSHA requirements, the Contractor can propose alternative, so we adopt “comply with” to 2.8.4 as same as 2.1.3 Noise.</p> <p>By reference to JSSS 1.4 [Compliance with JSSS and Other Regulations], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS and unless otherwise approved by the Engineer, the Contractor shall take necessary measures for fire prevention complying</p>	<p>By reference to JSSS 1.4 [<i>Compliance with JSSS and Other Regulations</i>], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS and unless otherwise approved by the Engineer, the Contractor shall take necessary measures for fire prevention complying with the technical requirements specified in OSHA Subpart F, Fire Protection and Prevention 1926. 152</p>
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<p>and storage of flammable and combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).</p> <p>In addition, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer. (2) Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight, (3) Take measures to prohibit entry to non-authorized personnel and display signage prohibiting the use of flame. (4) Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor’s Personnel. (5) Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials. <p>2.8.6 Additional Service Requirement</p> <p>Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, and if so specified in the Particular Safety Specification, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor’s Personnel and Employer’s Personnel, to compensate for any such lack of available public services or facilities.</p> <ol style="list-style-type: none"> (1) Such additional facilities may include sufficient temporary water and power supply to maintain emergency use. (2) Enhanced fire protection equipment and 	<p>petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).</p> <p>In addition, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer. (2) Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight, (3) Take measures to prohibit entry to non-authorized personnel and display signage prohibiting the use of flame. (4) Determine handling methods of flammable and combustible materials, and notify it to the Engineer, and ensure full awareness of the methods to the Contractor’s Personnel. (5) Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials. <p>2.8.6 Additional Service Requirement</p> <p>Where the Site of the Works is situated some distance away from urban areas and where there may be a consequent lack of immediate availability of emergency fire and rescue services and facilities, or where such services and/or facilities are lacking in capability or standard of care, and if so specified in the Particular Safety Specification, the Contractor shall be responsible for providing additional services and facilities at the Site as are necessary to fully protect all Contractor’s Personnel and Employer’s Personnel, to compensate for any such lack of available public services or facilities.</p> <ol style="list-style-type: none"> (1) Such additional facilities may include sufficient temporary water and power supply to maintain emergency use. (2) Enhanced fire protection equipment and facilities around the Site. 	<p>with referring to the technical requirements specified in OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).</p> <p>In addition, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer. (2) Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight and extreme heat. (3) Take measures to prohibit entry to unauthorised personnel and display signage prohibiting the use of flame. (4) Determine handling methods of flammable and combustible materials, which shall be notified to the Engineer, and ensure Contractor’s Personnel are fully aware of the methods. (5) Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials. <p>NK: The 2.8.6 Additional Services Requirement is described in User Guide, so MD deleted 2.8.6.</p>	<p>for the usage and storage of flammable and combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).</p> <p>In addition, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer. (2) Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight and extreme heat, (3) Take measures to prohibit entry to unauthorised personnel and display signage prohibiting the use of flame. (4) Determine handling methods of flammable and combustible materials, which shall be notified to the Engineer, and ensure Contractor’s Personnel are fully aware of the methods. (5) Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials.
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<p style="text-align: center;">facilities around the Site.</p> <p>2.8.7 Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>The Contractor shall refer to and comply with JSSS 7.8 [Electric and Gas Welding and Cutting] for the fire prevention requirements for electric and gas welding and cutting works.</p>	<p>2.8.7 Fire Prevention Measures for Electric and Gas Welding and Cutting</p> <p>The Contractor shall refer to and comply with JSSS 7.8 [Electric and Gas Welding and Cutting] for the fire prevention requirements for electric and gas welding and cutting works.</p>	<p>2.8.5 Fire Prevention Measures for Electric and Gas Welding and Gas Cutting</p> <p>The Contractor shall refer to and comply with JSSS 6.8 [Electric and Gas Welding and Gas Cutting Works] for the fire prevention requirements for electric and gas welding and gas cutting works.</p>	<p>2.8.6 Fire Prevention Measures for Electric and Gas Welding and Gas Cutting</p> <p>The Contractor shall refer to and comply with JSSS 6.8 [Electric and Gas Welding and Gas Cutting Works] for the fire prevention requirements for electric and gas welding and gas cutting works.</p>
<p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT</p> <p>2.9.1 Personal Protective Equipment (PPE)</p> <p>(1) General</p> <p>(a) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(b) PPE shall comply with the additional requirements of this Section.</p> <p>(c) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(i) Head Protection;</p> <p>(ii) Protective Footwear; and</p> <p>(iii) Work Clothing</p> <p>(d) The following additional PPE shall be provided whenever required by the working environment:</p> <p>(i) Eye and Face Protection;</p> <p>(ii) Ear Protection</p> <p>(iii) Respiratory Protection</p>	<p>2.9 PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID KIT</p> <p>2.9.1 Personal Protective Equipment (PPE)</p> <p>(1) General</p> <p>(a) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(b) PPE shall comply with the additional requirements of this Section.</p> <p>(c) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(i) Head Protection; and</p> <p>(ii) Protective Footwear;</p> <p>(d) The following additional PPE shall be provided whenever required by the working environment:</p> <p>(i) Eye and Face Protection;</p> <p>(ii) Ear Protection</p> <p>(iii) Respiratory Protection</p>	<p>2.9 PPE AND FIRST AID</p> <p><i>Inclusion of AED is more than a "First Aid Kit" hence I suggest that "Equipment" is used in the above title, however this Section also includes training of first aiders so maybe better to call "PPE and First Aid". I have changed on this assumption pleased advise if otherwise.</i></p> <p>NK: agreed to the title proposed.</p> <p>2.9.1 PPE</p> <p>(1) General</p> <p>(a) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(b) PPE shall comply with the additional requirements of this Section;</p> <p>(c) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(i) Head Protection.</p> <p>(ii) Protective Footwear.</p> <p>(d) The following additional PPE shall be provided whenever required by the working environment:</p> <p>(i) Eye and Face Protection.</p> <p>(ii) Ear Protection.</p>	<p>2.9 PPE AND FIRST AID</p> <p>2.9.1 PPE</p> <p>(1) General</p> <p>(a) Further to the requirements of JSSS 1.33 [Contractor's Equipment, Temporary Works, Safety Equipment and Personal Protective Equipment] the Contractor shall provide all necessary and required PPE free of any charge to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;</p> <p>(b) PPE shall comply with the additional requirements of this Section;</p> <p>(c) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:</p> <p>(i) Head Protection.</p> <p>(ii) Protective Footwear.</p> <p>(d) The following additional PPE shall be provided whenever required by the working environment:</p> <p>(i) Eye and Face Protection.</p> <p>(ii) Ear Protection.</p> <p>(iii) Respiratory Protection.</p>

<p>(iv) PPE for PFRS and PFAS (Safety Belts, Full body harnesses, and others)</p> <p>(v) Gloves</p> <p>(vi) Work Clothing</p> <p>JC13: 2.6.1(1)(d)及び 2.9.2(9):PPE から作業服に関する記述を削除しています。いろいろと議論があったところですが、やはり「コントラクターが支給する」ということをデフォルトにするのはやりすぎのように思います。</p> <p>2.6.1(1)(d) and 2.9.2(9): The requirements regarding working clothes are deleted. Though there is various discussion, it is excessive to specify as default for the Contractor to provide workers working clothes.</p> <p>NK : 作業服に替えて、OSHA で規定している次の PPE を規定し、その中に作業服に代えて body protection を規定することを提案します。</p> <p>NK propose to specify body protection for working clothing referring to the following OSHA guide and reference clause:</p> <p>OSHA defines Personal Protective Equipment is equipment worn to minimize exposure to a variety of hazards. Examples of personal protective equipment generally fall into the following categories:</p> <ul style="list-style-type: none"> · Eye and Face Protection. · Head Protection. · Leg and Foot Protection. · Hand and Arm Protection. · Hearing Protection. · <u>Body Protection.</u> · Respirators. <p>§ 1926.57 Ventilation. (f) Abrasive blasting (2) Dust hazards from abrasive blasting. (v) Operators shall be equipped with <u>heavy canvas or leather gloves and aprons or equivalent protection to protect them from the impact of abrasives</u>. Safety shoes shall be worn to protect against foot injury where heavy pieces of work are handled.</p> <p>(e) First-aid Kits and First-Aid Equipment must always be provided.</p> <p>(f) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.</p> <p>NK: Following the comment to (6) Respiratory Protection, the maintenance of PPE is additionally specified in (e).</p> <p>NK: (e) First-aid Kits is moved to 2.9.2 (1) because 2.9.1 is for PPE.</p> <p>(f) Maintenance of all PPE shall be made, except for disposable (single use) PPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month or as specified in the</p>	<p>(iv) PPE for PFRS and PFAS (Safety Belts, Full body harnesses, and others)</p> <p>(v) Gloves</p> <p>(vi) Body Protection</p> <p>(e) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.</p> <p>(f) Maintenance of all PPE shall be made, except for disposable (single use) PPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month or as specified in the</p>	<p>(iii) Respiratory Protection.</p> <p>(iv) PPE for PFRS and PFAS (Safety Harnesses, Safety Belts and the like);</p> <p>(v) Gloves.</p> <p>(vi) Body Protection</p> <p>(e) First-aid Kits and First-Aid Equipment must always be provided.</p> <p>NK: This 2.9.1 specifies PPE and provision is specified in (a) above, so (e) is deleted.</p> <p>(e) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.</p> <p><i>The following additional clause is already largely included with JSSS 1.35.1</i></p> <p>NK: (2) will specify PPE and those for First aid kits and AED is moved to 2.9.6.</p> <p>(2) Additional Inspection, Testing and Maintenance</p> <p>Further to the requirements of JSSS 1.35.1 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE] and unless otherwise required by the manufacturer or</p>	<p>(iv) PPE for PFRS and PFAS (Safety Harnesses, Safety Belts and the like);</p> <p>(v) Gloves.</p> <p>(vi) Body Protection.</p> <p>(e) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.</p> <p>(2) Additional Inspection, Testing and Maintenance</p> <p>Further to the requirements of JSSS 1.35.1 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE] and unless otherwise required by the manufacturer or</p>
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Safety Plan or in accordance with the manufacturer's instructions. However, if the PPE is used only occasionally, an examination and test should be carried out before use and, in any event, the interval should not exceed three months or as specified in the Safety Plan or in accordance with the manufacturer's instructions.

approved by the Engineer:

- (a) Frequently used PPE shall be inspected, tested and maintained at least once a month; and
- (b) Occasionally used PPE shall be inspected before every use and tested and maintained at least once every three months.

The HSO shall conduct routine inspections and maintenance checks on any PPE, First aid kits and AED in the Site who shall Safety AEDs within the Site. Inspections are on: ~~the checks~~

NK: We modified to separate requirement to PPE and first aid kit and AED.

- (a) Inventory and reorder supplies;
- (b) Follow up with the manufacturer on maintenance issues; and
- (c) Schedule training and retraining.

(3) PPE Signage Requirements

- (a) The Contractor shall display signage at specific places at the Site where the wearing of PPE is mandatory;
 - (b) Such signage shall include for example:
 - (i) "Head Protection Must be Worn"
 - (ii) "Eye* Protection Must be Worn"
- (* face, ear or other)

(4) Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

	Standard	Title of Standard
1	JIS T8131	Industrial Safety Helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial Safety Helmets

(5) Protective Footwear

approved by the Engineer:

- (a) Frequently used PPE shall be inspected, tested and maintained at least once a month; and
- (b) Occasionally used PPE shall be inspected before every use and tested and maintained at least once every three months.

The HSO shall conduct routine inspections and maintenance on any PPE in the Site. Inspections are on:

- (a) Inventory and reorder supplies;
- (b) Follow up with the manufacturer on maintenance issues; and
- (c) Schedule training and retraining.

(3) PPE Signage Requirements

- (a) The Contractor shall display signage at specific places at the Site where the wearing of PPE is mandatory;
 - (b) Such signage shall include for example:
 - (i) "Head Protection Must be Worn"
 - (ii) "Eye* Protection Must be Worn"
- (* face, ear or other)

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3	BS EN 397	Industrial Safety Helmets

(2) Head Protection

Head protection shall protect workers' heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against from electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.1: Applicable Standards for Head Protection

	Standard	Title of Standard
1	JIS T8131	Industrial Safety Helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial Safety Helmets

(3) Protective Footwear

(3) **Protective Footwear**

Protective footwear shall protect against foot injury due to crushing by superimposed loads, impact injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers' from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, **electrically insulating** or thermally insulating, appropriate footwear shall be selected for the risks identified.

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
	JIS T8101	Protective footwear
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20346	Personal protective equipment - Protective footwear
	BS EN ISO 20349	Personal protective equipment. Footwear protecting against risks in foundries and welding

(4) **Eye and Face Protection**

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

	Standard	Title of Standard

Protective footwear shall protect against foot injury due to crushing by superimposed loads, impact injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers' from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, **electrically insulating** or thermally insulating, appropriate footwear shall be selected for the risks identified.

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

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Standard	Title of Standard
JIS T8101	Protective footwear
ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
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Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

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Protective footwear shall ensure a level of performance that is equal to or greater than the following standards.

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(6) **Eye and Face Protection**

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris, etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

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Table 2.9.2: Applicable Standards for Protective Footwear

Standard	Title of Standard
JIS T8101	Protective footwear
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(6) **Eye and Face Protection**

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris, etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.3: Applicable Standards for Eye and Face Protection

Standard	Title of Standard

1	JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
2	ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
3	BS EN 166 BS EN ISO 4007	Personal eye protection. Specifications Personal protective equipment. Eye and face protection. Vocabulary

(5) Ear Protection

Ear protection shall protect workers' hearing against injury from continuous, loud or Intense Noise by providing soundproofing.

The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

Standard	Title of Standard
1	JIS T 8161 Ear protectors
2	ANSI/ASA S12.6 Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
3	BS EN ISO 4869-1 Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn BS EN ISO 4869-2 Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture BS EN ISO 4869-3 Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs BS EN ISO 4869-4

(6) Respiratory Protection

Respiratory protection shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
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Ear protector shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.4: Applicable Standards for Ear Protection

Standard	Title of Standard
JIS T 8161	Ear protectors
ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
BS EN ISO 4869-1	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn
BS EN ISO 4869-2	Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture
BS EN ISO 4869-3	Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs
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(7) Ear Protection

Ear protection shall protect workers' hearing against injury from continuous, loud or Intense Noise by providing soundproofing.

The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

Ear protection shall ensure a level of performance that is equal to or greater than the following standards.

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Standard	Title of Standard
JIS T 8161	Ear protectors
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BS EN ISO 4869-2	Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture
BS EN ISO 4869-3	Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs
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(8) Respiratory Protection Equipment (RPE)

RPE shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

Selection and use of RPE shall be in

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The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

Ear protection shall ensure a level of performance that is equal to or greater than the following standards.

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BS EN ISO 4869-2	Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture
BS EN ISO 4869-3	Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs
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(8) Respiratory Protection Equipment (RPE)

RPE shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

Selection and use of RPE shall be in

<p>Respiratory protection equipment (RPE) shall fit properly to worker's face and be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.</p> <p>When replacing them or any other part, check with the manufacturer's guidance and ensure the correct replacement part is used.</p> <p>Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.</p> <p><u>Maintenance is a requirement for all RPE, except for disposable (single use) RPE, and should be carried out by properly trained personnel. Thorough maintenance, examination and tests should be carried out at least once a month. However, if the RPE is used only occasionally, an examination and test should be carried out before use and, in any event, the interval should not exceed three months. Emergency escape-type RPE should be examined and tested in accordance with the manufacturer's instructions.</u></p> <p>JC15: 2.9.1(6) 上の文章は PPE の全体にかかるものではないでしょうか。2.9.1(1)に移すべきではないでしょうか。</p> <p>2.9.1(6): The above seems to cover whole PPE. Therefore, they should be moved to 2.9.1(1).</p> <p>NK: moved to 2.9.1 (1) (f) as general requirement and the above is modified as right.</p> <p>In addition to the requirements above, the Contractor shall select, use and maintain RPE referring to Respiratory protective equipment at work, practical guide, HSG53 (Fourth edition, published 2013).</p>	<p>Respiratory protection equipment (RPE) shall fit properly to worker's face and be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.</p> <p>When replacing them or any other part, check with the manufacturer's guidance and ensure the correct replacement part is used.</p> <p>Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.</p> <p>In addition to JSSS 2.9.1 (1) (f), maintenance for emergency escape-type RPE should be examined and tested in accordance with the manufacturer's instructions.</p> <p>In addition to the requirements above, the Contractor shall select, use and maintain RPE referring to Respiratory protective equipment at work, practical guide, HSG53 (Fourth edition, published 2013).</p>	<p>accordance with HSE publication HSG53 (Fourth edition, published 2013), (https://www.hse.gov.uk/pubns/priced/hsg53.pdf), RPE must be both adequate and suitable, whereby:</p> <p>(a) Adequate: – Is right for the hazard and reduces exposure to the level required to protect the wearer's health.</p> <p>(b) Suitable – Is right for the wearer, task and environment, such that the wearer can work freely and without additional risks due to the RPE."</p> <p>The original wording of the following paragraph is correct, I have not changed:</p> <p>RPE shall fit properly and filters shall be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.</p> <p>When replacing parts such as filters, use only manufacturers original parts, ensure that the correct type is selected and fit in accordance with the manufacturer's instructions.</p> <p>Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.</p> <p>There is no need for the following it is already covered by JSSS 1.35.and 2.9.1</p> <p>In addition to JSSS 2.9.1 (1) (f), maintenance for emergency escape-type RPE should be examined and tested in accordance with the manufacturer's instructions.</p>	<p>accordance with HSE publication HSG53 (Fourth edition, published 2013), (https://www.hse.gov.uk/pubns/priced/hsg53.pdf), RPE must be both adequate and suitable, whereby:</p> <p>(a) Adequate: – Is right for the hazard and reduces exposure to the level required to protect the wearer's health.</p> <p>(b) Suitable: – Is right for the wearer, task and environment, such that the wearer can work freely and without additional risks due to the RPE."</p> <p>RPE shall fit properly and filters shall be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.</p> <p>When replacing parts such as filters, use only manufacturers original parts, ensure that the correct type is selected and fit in accordance with the manufacturer's instructions.</p> <p>Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.</p>
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Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: Table of PPE for Respiratory Protection

	Standard	Title of Standard
1	JIS T 8151 JIS T 8157	Particulate respirator Powered air purifying respirator
2	BS EN 149: 2001+A1: 2009 BS EN 14593-1: 2018	Respiratory protective devices. Filtering half masks to protect against particles. Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

(7) Safety Harnesses and Belts

Safety belts PPE for PFRS shall prevent the risk of workers falling from a height or sliding down slopes. PPE for PFAS shall arrest a worker in a fall from a height or sliding down slopes.

For further requirement on PPE for fall prevention, PFRS and PFAS refer to JSSS 2.5.13 [Personal Protective Equipment for Fall Prevention].

PPE for PFRS and PFAS shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for PPE for PFRS and PFAS

	Standard	Title of Standard
1	JIS T8165	Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN_361 BS EN 358	Personal protective equipment against falls from a height. Full body harnesses Personal protective equipment for work positioning and prevention of falls from a height. Belts and lanyards for work positioning or restraint

JC14: またこれは総則の定義にもさかのぼる全般の話なのですが、デフォルトで使用することを想定している harness が普通名詞で、一般には使用が制限される方向にある胴ベルトが Safety Belt として大文字の定義語になっているのが少し気になります。但し、これは全体を整理する中で再

Respiratory protection shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: Table of PPE for Respiratory Protection

	Standard	Title of Standard
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3	ANSI Z88.2-2015	Practices for Respiratory Protection

(7) Safety Harnesses and Belts

PPE for PFRS shall prevent the risk of workers falling from a height or sliding down slopes. PPE for PFAS shall arrest a worker in a fall from a height or sliding down slopes.

For further requirement on PPE for fall prevention, PFRS and PFAS refer to JSSS 2.5.13 [Personal Protective Equipment for Fall Prevention].

PPE for PFRS and PFAS shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for PPE for PFRS and PFAS

	Standard	Title of Standard
1	JIS T8165	Personal fall-arrest systems
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3	BS EN_361 BS EN 358	Personal protective equipment against falls from a height. Full body harnesses Personal protective equipment for work positioning and prevention of falls from a height. Belts and lanyards for work positioning or restraint

RPE shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: T Applicable Standards for RPE

Standard	Title of Standard
JIS T 8151	Particulate respirator
JIS T 8157	Powered air purifying respirator
BS EN 149: 2001+A1: 2009	Respiratory protective devices. Filtering half masks to protect against particles.
BS EN 14593-1: 2018	Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
ANSI Z88.2-2015	Practices for Respiratory Protection

(9) Safety Harnesses and Safety Belts

PPE for PFRS shall prevent the risk of workers falling from a height or sliding down slopes.

PPE for PFAS shall arrest a worker in a fall from a height or sliding down slopes.

For further requirements on PPE for PFRS and PFAS, refer to JSSS 2.5.13 [PPE for Fall Prevention].

PPE for PFRS and PFAS shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for PPE for PFRS and PFAS

Standard	Title of Standard
JIS T8165	Personal fall-arrest systems
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RPE shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.5: T Applicable Standards for RPE

Standard	Title of Standard
JIS T 8151	Particulate respirator
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(9) Safety Harnesses and Safety Belts

PPE for PFRS shall prevent the risk of workers falling from a height or sliding down slopes.

PPE for PFAS shall arrest a worker in a fall from a height or sliding down slopes.

For further requirements on PPE for PFRS and PFAS, refer to JSSS 2.5.13 [PPE for Fall Prevention].

PPE for PFRS and PFAS shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.6: Applicable Standards for PPE for PFRS and PFAS

Standard	Title of Standard
JIS T8165	Personal fall-arrest systems
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検討すればよいと思います。

The term of harness which is specified to be used for PPE as default is not defined as “Harness”, on the other hand that of “safety belt” which is specified as limited use is defined as “Safety Belt” in Chapter 1. These terms seem a little strange. Definitions of terms will be discussed when reviewing whole contents of JSSS.

NK: Chapter 1 (issue 7) has included “Harness”. The definition of terms will be discussed after all JSSS is completed.

(8) Gloves

Gloves shall protect workers’ hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers’ hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8112 JIS T 8113 JIS T 8114	Gloves of insulating material used for electrical working (Japanese only) Protective Leather Gloves for Welders Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration - Measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (a nationally adopted international standard) (too long)
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

~~**(9) Work Clothing**~~

~~Contractor’s Personnel All personnel shall be supplied with and shall wear suitable protective work clothing required by the working environment appropriate for their work tasks. In general, all personnel shall be provided with overalls.~~

~~Further risks such as from chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, entanglement of own clothing, heat, cold, etc. shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame retardant, anti static,~~

(8) Gloves

Gloves shall protect workers’ hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers’ hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8113 JIS T 8114	Protective Leather Gloves for Welders Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

(9) Body Protection

Body protection shall protect workers’ body against injury from cuts, radiation, extreme temperatures, hot splashes, impacts from tools, machinery and materials, hazardous chemicals, etc.

PPE that provides body protection are for example laboratory coats, coveralls, vests, jackets, aprons, full body suits.

Appropriate PPE for body protection shall be selected based on the hazard assessment and tasks associated.

(10)Gloves

Gloves shall protect workers’ hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers’ hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8113 JIS T 8114	Protective Leather Gloves for Welders Vibration isolation gloves
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3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

(11)Body Protection

Contractor’s Personnel shall be supplied with and shall wear suitable body protection appropriate for the working environment.

Risks such as from chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, entanglement of own clothing, hot and extremely cold work; and the like shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame-retardant, anti-static, chain mail, chemically impermeable, and high-visibility clothing and the like.

(10)Gloves

Gloves shall protect workers’ hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers’ hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards.

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Risks such as from chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, entanglement of own clothing, hot and extremely cold work; and the like shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame-retardant, anti-static, chain mail, chemically impermeable, and high-visibility clothing and the like.

<p>chain mail, chemically impermeable, and high visibility clothing and the like.</p> <p>Work clothing shall be selected and provided for the risks to be identified.</p> <p>Work clothing shall be kept reasonably clean and shall be replaced when worn out or damaged.</p> <p>JC13: same comments to 2.9.1 (1) (d) and deleted (9).</p> <p>NK as proposed in 2.9.1 (1) (d) and replaced the above (9) Work Clothing with (9) Body Protection as right.</p> <p>2.9.2 First-aid Kits</p> <p>(1) General</p> <p>NK: 2.9.1(1)(e) First-aid Kits is moved to 2.9.2(1) because 2.9.1 is for PPE.</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid” of “Part 1910 - Occupational Safety and Health Standards” and as follows.</p> <p>The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.</p> <p>All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the first aid kit(s).</p>	<p>2.9.2 First-aid Kits</p> <p>(1) General</p> <p>The Contractor shall always provide First-aid Kits and First-Aid Equipment at the Site.</p> <p>By reference to JSSS 1.4 [JSSS - Laws and Reference Standards] for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall comply with the technical requirements of OSHA, 1910 Subpart K Medical and First Aid” of “Part 1910 - Occupational Safety and Health Standards” and as follows.</p> <p>The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.</p> <p>All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the first aid kit(s).</p>	<p><i>I do not suggest that you use the following as further examples are not necessary and these are not good examples. “Coveralls” for example are the same as “overalls” which I thought you were trying to avoid and lab coats, vests, jackets can all have different meanings:</i></p> <p><i>PPE that provides body protection are for example laboratory coats, coveralls, vests, jackets, aprons, full body suits.</i></p> <p><i>Appropriate PPE for body protection shall be selected based on the hazard assessment and tasks associated.</i></p> <p>Body Protection shall be selected and provided for the risks to be identified.</p> <p>Body Protection shall be kept reasonably clean and shall be replaced when worn out or damaged.</p> <p>2.9.2 First-Aid</p> <p>(1) General</p> <p>The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.</p> <p>(2) Training</p> <p>A representative number of Contractor’s Personnel selected by the HSO shall be trained in first aid (including cardiopulmonary resuscitation) to a minimum standard of that recommended by the International Federation of Red Cross and Red Crescent Societies standard course or equivalent.</p> <p>NK: The (3) below is added for first aid kits and AED separated from 2.9.1 (2).</p> <p>(3) Additional Inspection, Testing and Maintenance</p> <p>Further to the requirements of JSSS 1.35.1 [Contractor’s Equipment, Temporary Works, Safety Equipment and PPE] and unless otherwise required by the manufacturer or approved by the Engineer:</p> <p>The HSO shall conduct routine inspections maintenance checks on any first aid kits and AED in the Site. Inspections are on:</p> <p>(a) Inventory and reorder supplies;</p> <p>(b) Follow up with the manufacturer on maintenance issues; and</p> <p>(c) Schedule training and retraining.</p> <p>(4) First Aid Kits</p>	<p>Body Protection shall be selected and provided for the risks to be identified.</p> <p>Body Protection shall be kept reasonably clean and shall be replaced when worn out or damaged.</p> <p>2.9.2 First-Aid</p> <p>(1) General</p> <p>The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.</p> <p>(2) Training</p> <p>A representative number of Contractor’s Personnel selected by the HSO shall be trained in first aid (including cardiopulmonary resuscitation) to a minimum standard of that recommended by the International Federation of Red Cross and Red Crescent Societies standard course or equivalent.</p> <p>(3) Additional Inspection, Testing and Maintenance</p> <p>Further to the requirements of JSSS 1.35.1 [Contractor’s Equipment, Temporary Works, Safety Equipment and PPE] and unless otherwise required by the manufacturer or approved by the Engineer:</p> <p>The HSO shall conduct routine inspections maintenance checks on any first aid kits and AED in the Site. Inspections are on:</p> <p>(a) Inventory and reorder supplies;</p> <p>(b) Follow up with the manufacturer on maintenance issues; and</p> <p>(c) Schedule training and retraining.</p>
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<p>(2) First-Aid Kit</p> <p>Each first-aid kit should contain at least the following items, specifications and quantities listed in ANSI Z308.1-2015 according to the work:</p> <ul style="list-style-type: none"> (a) Adhesive Bandage (b) Adhesive Tape (c) Antibiotic Application (d) Antiseptic (e) Breathing Barrier (f) Burn Dressing (gel soaked) (g) Burn Treatment (h) Cold Pack (i) Eye Covering, with means of attachment (j) Eye/Skin Wash (k) First Aid Guide (l) Hand Sanitizer (m) Medical Exam Gloves (n) Roller Bandage (o) Scissors (p) Splint (q) Sterile pad (r) Tourniquet 	<p>(2) First-Aid Kit</p> <p>Each first-aid kit should contain at least the following items, specifications and quantities listed in ANSI Z308.1-2015 according to the work:</p> <ul style="list-style-type: none"> (a) Adhesive Bandage (b) Adhesive Tape (c) Antibiotic Application (d) Antiseptic (e) Breathing Barrier (f) Burn Dressing (gel soaked) (g) Burn Treatment (h) Cold Pack (i) Eye Covering, with means of attachment (j) Eye/Skin Wash (k) First Aid Guide (l) Hand Sanitizer (m) Medical Exam Gloves (n) Roller Bandage (o) Scissors (p) Splint (q) Sterile pad (r) Tourniquet (s) Trauma pad 	<ul style="list-style-type: none"> (a) By reference to JSSS 1.4 [<i>Compliance with JSSS and Other Regulations</i>], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for first aid complying with the technical requirements specified in OSHA, 1910 Subpart K Medical and First Aid of Part 1910 - Occupational Safety and Health Standards”. (b) First aid kits shall comply with ANSI Z308.1 and unless otherwise specified in the Particular Safety Specification, Class A first aid kits shall be provided at the working area(s) on Site and one Class B safety kit shall be provide at the sick bay. (c) All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the first aid kit(s). (d) Each first-aid kit shall contain the specified items and quantities listed in ANSI Z308 as follows: <ul style="list-style-type: none"> (i) Adhesive Bandage (ii) Adhesive Tape (iii) Antibiotic Application (iv) Antiseptic (v) Breathing Barrier (vi) Burn Dressing (gel soaked) (vii) Burn Treatment (viii) Cold Pack (ix) Eye Covering, with means of attachment (x) Eye/Skin Wash (xi) First Aid Guide (xii) Hand Sanitizer (xiii) Medical Exam Gloves (xiv) Roller Bandage (xv) Scissors (xvi) Splint (xvii) Sterile pad (xviii) Tourniquet (xix) Trauma pad (xx) Triangular Bandage 	<p>(4) First Aid Kits</p> <ul style="list-style-type: none"> (a) By reference to JSSS 1.4 [<i>Compliance with JSSS and Other Regulations</i>], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for first aid complying with the technical requirements specified in OSHA, 1910 Subpart K Medical and First Aid of Part 1910 - Occupational Safety and Health Standards”. (b) First aid kits shall comply with ANSI Z308.1 and unless otherwise specified in the Particular Safety Specification, Class A first aid kits shall be provided at the working area(s) on Site and one Class B safety kit shall be provide at the sick bay. (c) All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the first aid kit(s). (d) Each first-aid kit shall contain the specified items and quantities listed in ANSI Z308 as follows: <ul style="list-style-type: none"> (i) Adhesive Bandage (ii) Adhesive Tape (iii) Antibiotic Application (iv) Antiseptic (v) Breathing Barrier (vi) Burn Dressing (gel soaked) (vii) Burn Treatment (viii) Cold Pack (ix) Eye Covering, with means of attachment (x) Eye/Skin Wash (xi) First Aid Guide (xii) Hand Sanitizer (xiii) Medical Exam Gloves (xiv) Roller Bandage (xv) Scissors (xvi) Splint (xvii) Sterile pad (xviii) Tourniquet (xix) Trauma pad
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<p>(s) Trauma pad</p> <p>(t) Triangular Bandage</p> <p>To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, Cardiopulmonary Resuscitation (CPR) breathing barriers, eye protection and like supplies.</p> <p>(3) Automated External Defibrillator (AED)</p> <p>Unless otherwise stated in the bidding Documents Contract and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.</p> <p>The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.</p> <p>All personnel at the site need to be aware of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.</p> <p>Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.</p>	<p>(t) Triangular Bandage</p> <p>To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, Cardiopulmonary Resuscitation (CPR) breathing barriers, eye protection and like supplies.</p> <p>(4) Automated External Defibrillator (AED)</p> <p>Unless otherwise stated in the bidding Documents Contract and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.</p> <p>The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.</p> <p>All personnel at the site need to be aware of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.</p> <p>Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.</p>	<p>(e) Each first-aid kit shall contain any additional items and quantities that may be necessary according to the requirements and location of the Works.</p> <p>(f) The Contractor shall ensure that the following additional items are provided with each first aid kit:</p> <p>(i) A list of emergency phone numbers</p> <p>(ii) Flashlight and extra batteries</p> <p>(iii) Bottled drinking water</p> <p>(g) To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, CPR breathing barriers, eye protection and like supplies.</p> <p>(5) Automated External Defibrillator – AED</p> <p>(a) Unless otherwise specified in the Particular Safety Specification, and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.</p> <p>(b) The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.</p> <p>(c) All personnel at the site shall be kept informed of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.</p> <p>(d) Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.</p> <p>(e) Further to the requirements of JSSS 2.9.1 (3) [<i>Additional Inspection, Testing and Maintenance</i>] and unless otherwise required by the manufacturer or approved by the Engineer, AED's shall be inspected and maintained at least once per month as follows:</p> <p>(i) Visually inspect looking for dirt, damage, or contamination.</p> <p>(ii) Inspect electrodes ensuring that they are unexpired and in their original, sealed packages, two sets shall be provided.</p> <p>(iii) Test primary battery.</p> <p>(iv) Make sure a backup battery is stored with the AED and test</p>	<p>(xx) Triangular Bandage</p> <p>(e) Each first-aid kit shall contain any additional items and quantities that may be necessary according to the requirements and location of the Works.</p> <p>(f) The Contractor shall ensure that the following additional items are provided with each first aid kit:</p> <p>(i) A list of emergency phone numbers</p> <p>(ii) Flashlight and extra batteries</p> <p>(iii) Bottled drinking water</p> <p>(g) To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, CPR breathing barriers, eye protection and like supplies.</p> <p>(5) Automated External Defibrillator – AED</p> <p>(a) Unless otherwise specified in the Particular Safety Specification, and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site.</p> <p>(b) The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay.</p> <p>(c) All personnel at the site shall be kept informed of the purpose and location and the Contractor shall train a sufficient number of personnel in its use.</p> <p>(d) Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use.</p> <p>(e) Further to the requirements of JSSS 2.9.1 (2) [<i>Additional Inspection, Testing and Maintenance</i>] and unless otherwise required by the manufacturer or approved by the Engineer, AED's shall be inspected and maintained at least once per month as follows:</p> <p>(i) Visually inspect looking for dirt, damage, or contamination.</p> <p>(ii) Inspect electrodes ensuring that they are unexpired and in their original, sealed packages, two sets shall be provided.</p> <p>(iii) Test primary battery.</p>
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AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	BS EN 60601-2-4:2011+A1:2019	Medical electrical equipment. Particular requirements for the basic safety and essential performance of cardiac defibrillators

AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	BS EN 60601-2-4:2011+A1:2019	Medical electrical equipment. Particular requirements for the basic safety and essential performance of cardiac defibrillators

backup battery.

(v) Keep the AED charged and check it is maintaining a charge

The AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	BS EN 60601-2-4:2011+A1:2019	Medical electrical equipment. Particular requirements for the basic safety and essential performance of cardiac defibrillators

(iv) Make sure a backup battery is stored with the AED and test backup battery.

(v) Keep the AED charged and check it is maintaining a charge

The AED shall ensure a level of performance that is equal to or greater than the following standards.

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	BS EN 60601-2-4:2011+A1:2019	Medical electrical equipment. Particular requirements for the basic safety and essential performance of cardiac defibrillators

Change by SS on Issue 4

Changes between Issue 2 and Issue 3

Changes for Issue 4

JICA STANDARD SAFETY SPECIFICATION FOR PROJECT IMPLEMENTATION UNDER JAPANESE ODA

CHAPTER 2: GENERAL SAFETY MEASURES

***Japan International Cooperation Agency
(JICA)***

JICA STANDARD SAFETY SPECIFICATION (JSSS) CHAPTER 2: GENERAL SAFETY MEASURES

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2.1 WORK ENVIRONMENT

Contractor's Personnel shall be provided with a safe and healthy occupational environment. The Contractor shall implement all necessary measures to ensure this, taking particular care to avoid the creation of and/or any contact with Hazardous Substances, intense noise, heat, cold or similar and potentially harmful conditions or to provide protection against such conditions.

2.1.1. Hazardous Substances

(1) Definitions

Refer to the definition of Hazardous Substances in JSSS Annex 1.1 [*Definitions and Abbreviations*]. For the purposes of this definition, note that Hazardous Substances shall include dust of any kind when present at a concentration in air equal to or greater than:

- (a) 10 mg/m³ (8-hour TWA) of inhalable dust; or
- (b) 4 mg/m³ (8-hour TWA) of respirable dust.

2.1.2. Compliance Standards

(1) By reference to JSSS 1.4 [*Compliance with JSSS and Other Regulations*], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for work environment complying with the technical requirements specified in EH40/2005 Workplace Exposure Limits, (third edition published 2018), issued by HSE.

(2) The Contractor shall monitor all substances and ensure that the Short Term and Long-Term exposure limits in HSE Table 1 are not exceeded.

(3) Asbestos

(a) The Contractor shall be aware that asbestos causes occupational fatalities. It is commonly found in older buildings frequently in ceiling and floor cavities, insulation, sprayed coatings, floor tiles and composites, asbestos-cement sheets and roofing felt;

(b) If the scope of Works requires removal of any of the above materials then the Contractor shall check for asbestos content, then remove and dispose of such materials in compliance with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; and

(c) If the Particular Safety Specification specifies that asbestos may exist at the Site and that the Contractor is responsible for the removal and disposal or if it is discovered during the execution of the Work and the Contractor is instructed by the Engineer to remove it, then the Contractor shall take measures in accordance with the requirements of JSSS 1.22 [*Dangerous Work*]; and comply with L143 Approved Code of Practice and guidance, for Managing and Working with Asbestos (second edition published 2013), issued by HSE; for the controlled safe removal and disposal of asbestos.

(4) Other Hazardous Substances

The Contractor shall comply with relevant HSE regulations with regard to health and environmental management and control of any other Hazardous Substances either existing on the Site, used in or encountered on the Works.

(5) Prevention

(a) The Contractor shall prevent dust emission, by keeping the source moist and covering dust creating areas and materials with suitable dust-proof sheeting; and

(b) The Contractor shall provide all necessary Contractor's Equipment and Temporary

Works to achieve this including water-bowsers, spraying equipment, extract ventilation and filtration equipment.

- (6) PPE
 - (a) If, in the opinion of the HSO, it is not reasonably practicable to reduce dust to acceptable levels, PPE shall be provided for all Contractor’s Personnel; and
 - (b) For details of PPE refer to JSSS 2.9.1 [PPE].

2.1.3. Poor Ventilation

- (1) The Contractor shall inspect and carry out tests to ensure that all working areas have adequate and healthy natural ventilation.
- (2) If any areas do not have adequate and healthy natural ventilation, the Contractor shall provide suitable and efficient mechanical ventilation systems with fans, ducting and all associated devices and services to improve the working environment to acceptable safe levels.
- (3) If this is not completely possible then PPE (breathing apparatus) shall be used in accordance with the requirements of JSSS 2.9.1 (8) [Respiratory Protection Equipment (RPE)].
- (4) The Contractor shall generally prohibit the use of internal combustion engines in internal areas. When the use of such engines is unavoidable, the Contractor shall provide exhaust systems which safely and efficiently collect, contain and expel exhaust gases to external areas and provide additional adequate ventilation.

2.1.4. Noise

- (1) Compliance Standards
 - (a) By reference to JSSS 1.4 [Compliance with JSSS and Other Regulations], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for noise exposure and control complying with the technical requirements specified in OSHA Subpart D—Occupational Health and Environmental Controls §1926.52 Occupational noise exposure; and
 - (b) The Contractor shall provide equipment such as, sound level meters, noise dosimeters, or octave band analysers to determine what sound levels exist and whether they are within the levels in Table D-2 or not.
- (2) Preventive Measures

To prevent noise damage to Contractor’s Personnel, which may occur when noise levels exceed 90 dB (referred to as “intense noise” in JSSS), or if for any reason sound levels cannot be determined as above the Contractor shall:

- (a) Reduce sound levels through feasible administrative or engineering controls to within the levels of Table 2.1.1: OSHA Table D-2: Permissible Noise Exposures of the OSHA Standard referred to above, if at all possible:

Table 2.1.1: OSHA Table D-2: Permissible Noise Exposures

Duration per day, hours	Sound level dBA slow response	Duration per day, hours	Sound level dBA slow response
8	90	1½	102
6	92	1	105

4	95	$\frac{1}{2}$	110
3	97	$\frac{1}{4}$ or less	115
2	100		

- (b) If such controls are not possible or if they fail to reduce sound levels within the levels of OSHA Table D-2, provide PPE for all Contractor's Personnel as specified in JSSS 2.9.1 (7) [*Ear Protection*] in consideration of the noise level and length of noise exposure at the work area in accordance with the provisions of the OSHA Standard;
- (c) Post warning signs at the work area to make all Contractor's Personnel aware that ear protection must be worn; and
- (d) In all cases where the sound levels exceed the values shown OSHA Table D-2, a Continuing Effective Hearing Conservation Program specified in (3) below shall be implemented.

(3) Hearing Conservation Program

- (a) The Contractor shall implement a hearing protection and conservation program whereby noise exposure levels are monitored in order to accurately identify any Contractor's Personnel that are exposed to noise at or above 90 dB averaged over 8 working hours, or an 8-hour time TWA; and
- (b) The Contractor shall monitor all workers whose noise exposure is equivalent to or greater than a noise exposure received in eight (8) hours where the noise level is constantly 90 dB. The exposure measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. The Contractor shall choose the monitoring method that best suits each individual situation.

2.1.5. Further Requirements for Dangerous Work

Further to the requirements of JSSS 1.22 [*Dangerous Work*] and in relation to work in Confined Spaces, Hazardous Areas, or Operational Areas or in the presence of or requiring the use of Hazardous Substances or Dangerous Goods or other work which is especially and potentially dangerous, requiring the application of special skills, safety equipment, safety measures and PPE, the Contractor shall establish systems and procedures to ensure the safety of all Contractor's Personnel engaged upon or supervising or managing such Dangerous Work, and for this purpose the Contractor shall:

- (1) Measure the concentration of oxygen, hydrogen sulphide, carbon dioxide, carbon monoxide, chlorine, chlorine dioxide, trade effluent and any other potentially harmful materials, gases and chemicals, or other work environment items before starting any work.
- (2) Safely isolate the supply and flow of any trade effluent, chemical or other potentially harmful and materials, gases and chemicals during the period of any work and safely reconnect or continue same after the work is finished.
- (3) Improve and maintain the work environment for example by mechanical ventilation and filtration if the result of the work environment measurement in (1) above violates the limits imposed by this JSSS Chapter 2 [*General Safety Measures*].
- (4) For further information on the removal and disposal of Hazardous Substances refer to JSSS 1.22 [*Dangerous Work*].
- (5) For further information on prohibition of entry to areas where Dangerous Work is being performed refer to JSSS 2.3 [*Prohibition of Entry - Dangerous Work*].

2.1.6. High and Low Temperatures and Humidity

- (1) To avoid health hazards due to excessively hot, cold or humid working environments, the Contractor shall improve the environmental working conditions for all Contractor's Personnel by:
 - (a) Providing temporary covers and shade to protect workers from rain, hail, snow, sunlight and reflection from the surrounding wall and ground;
 - (b) Providing protection from any heat or cold source and provide adequate ventilation, heating or air conditioning for indoor working;
 - (c) Where permitted by the Engineer **in hot climates**, carrying out work during the night when temperatures and humidity are lower;
 - (d) Providing drinking water and supplement that allow salt replenishment at **the** work place;
 - (e) Providing a rest station with heating, air conditioning or shade near the work place, or providing other facilities equipped with accommodation that allow personnel who fall ill to lie down and recover;
 - (f) Allowing work breaks and reducing excessive and continuous working times; and
 - (g) Allowing an initial acclimatisation period for Contractor's Personnel to become used to the heat or cold.
- (2) The Contractor shall ensure that workers wear moisture-permeable and loose-fitting clothing in hot climates and suitably warm, insulated and waterproof clothes in cool or cold climates.
- (3) If any undesirable conditions are detected, the Contractor shall take appropriate measures to correct the situation, allowing Contractor's Personnel to rest or temporarily stop the work until the conditions improve.
- (4) The Contractor shall ensure that all Contractor's Personnel are properly dressed in suitable insulated cold weather clothing to work safely in low temperatures.
- (5) The Contractor shall monitor the health of Contractor's Personnel before and during the work and allowing Contractor's Personnel to take a rest and/or rehydrate and shall act if any abnormalities are observed.

2.1.7. Monitoring and Records

- (1) The Contractor shall monitor the working environment and prepare regular daily, weekly and monthly records of dust, noise, air and water quality, inadequate natural ventilation, rainfall, snowfall, temperatures, humidity, wind speed and direction regularly throughout the Time for Completion of the Works.
- (2) The procedure for preparation and submission of such records shall be as stated in JSSS **1.32** [*Safety Reports*].
- (3) The Contractor's monitoring and recording shall also cover:
 - (a) The pre-existent conditions for all periods of Dangerous Work;
 - (b) Dust at work places where excessive dust and waste material such as dirt, rocks, minerals, metals, carbon, cement, etc. is generated;
 - (c) Noise levels at work places that generate intense noise;
 - (d) Ventilation volume, temperature and concentration of carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, other toxic or dangerous gases at work places including tunnels and deep pits and Confined Spaces; and
 - (e) Illuminance at work place, walkways and passageways.**

- (4) The above monitoring shall be conducted separately from the environmental monitoring that may be required by the Laws of the Country and any environmental monitoring that may be separately specified in the Contract.
- (5) For the following measurement items, if the following limits are violated, the Contractor shall take the measures prescribed in JSSS 1.22 [*Dangerous Work*], JSSS 2.1.5 [*Further Requirements for Dangerous Work*] and JSSS 2.3 [*Prohibition of Entry – Dangerous Work*].
 - (a) Values of limits of measurement items:
 - (i) Oxygen concentration less than 19.0% and more than 23.5%;
 - (ii) Hydrogen sulphide concentration more than 10 ppm (short-term exposure limit) or 5 ppm (long term exposure limit);
 - (iii) Carbon dioxide concentration more than 15,000 ppm (short-term exposure limit) or 5,000 ppm (long term exposure limit); and
 - (iv) Values of limits for other substances given in EH40/2005 Workplace Exposure Limits (third edition published 2018), issued by HSE, Table 1.
 - (b) Combustible gas and vapor concentration: in excess of 10% of the lower limit of flammability.
- (6) The Contractor shall also monitor any vibration, settlement and other adverse effects arising out of the execution of the Works to ascertain if these are causing any adverse effect to ground, buildings, structures and other properties, paved areas, roads, footpaths, fences, railways, waterways, drainage, utilities or any other property on the Site or outside the Site (collectively referred to in this Section as “other properties”) to ensure that no damage or weakening is caused to such other properties.
- (7) Monitoring shall be accomplished by the Contractor through regular inspection, measurement, ~~and~~ survey, ~~and~~ instrument monitoring and recording as determined by the nature and scope of the Works ~~or as~~ as the Contractor shall take additional monitoring measures if so required by the Particular Safety Specification.
- (8) Works that require monitoring shall include the following where any risk of damage is perceived by the HSO or Engineer:
 - (a) ~~Excavation Earth Works (including Blasting Works);~~
 - (b) Foundation Piling Works;
 - (c) Ground improvement;
 - (d) Temporary dewatering in underground;
 - (e) Temporary Works such as major items of Earthwork Support, Cofferdams and the like; to demonstrate that they are performing safely, to the designed limits and for the intended purpose;
 - (f) Other parts of the Works required to evidence the Contractor’s compliance with the Contract; and
 - (g) Other parts of the Works ~~which may be~~ specified in the Particular Safety Specification.
- (9) The Contractor shall prepare a monitoring plan as a part of the Safety Plan for the above Works which shall describe:
 - (a) The Contractor’s proposed ~~maximum~~ monitoring criteria for vibration, settlement and all other potential effects of the Works, which by the Contractor’s own calculations will ensure that no damage or weakening is caused to other properties;

- (b) The types, locations and numbers of monitoring instruments and other equipment;
- (c) The measurement frequency and recording methods; and
- (d) The countermeasures to be applied when the actual measured values are close to or exceed the various minimum, intermediate and maximum criteria.

(10) The Contractor shall:

- (a) Provide and maintain all survey equipment, monitoring and recording equipment to provide comprehensive, accurate and contemporary or live data with records, showing the performance characteristics of the Temporary Works;
- (b) Provide qualified staff to perform the monitoring;
- (c) Maintain and calibrate the monitoring instruments and equipment as necessary throughout the execution of the Works;
- (d) Perform survey and monitoring on a regular basis throughout the execution of the Works;
- (e) Confirm the occurrence and extent of any adverse effect impact of the Works execution by means of regular inspections of all other properties;
- (f) Take the measures prescribed when necessary to comply with the Contractor's obligations, propose remedial measures and implement such measures after receiving the consent of the Engineer;
- (g) Evaluate the measurement results and modify the monitoring criteria as necessary; and
- (h) Submit an evaluation report if necessary with any changes to the Safety Plan for Works to the Engineer before proceeding with the Works.

(11) Requirements for instrumentation systems shall be as follows:

- (a) The Contractor shall select instruments and measurement methods that meet the purpose of the measurement;
- (b) The Contractor shall determine locations and numbers of measurement points which meet the purpose of measurement and need for safety management. The locations of measurement shall be where measurement can be continuously made throughout the period of works are provided;
- (c) The instrumentation shall be regularly calibrated and protected against damage by the Contractor;
- (d) The HSO and other relevant Contractor's Personnel shall monitor the data and take all necessary corrective action consequent to such monitoring to ensure the continued compliant and safe performance of all Temporary the Works; and
- (e) The Engineer shall be invited to attend the inspections and data collection to ensure the Contractor's compliance in accordance JSSS 1.10 [Engineer's Safety Representative], JSSS 1.11 [Safety Compliance Instructions from the Engineer] and JSSS 1.16 [Joint Site Safety Inspections].

(12) Management based on Monitoring and Inspection

(a) Management by Visual Inspection:

If and when the Contractor finds any irregularity abnormality through visual inspection, the Contractor shall take necessary measures in accordance with the degree of abnormality, including verification of inspection results through measurement, survey or added instrumentation and the implementation of urgent countermeasures.

(b) Management by Instrument Measurement:

Unless otherwise specified in the Particular Safety Specification, the Contractor shall determine control limit values based initially upon the allowable displacement or stress in the design, then the following stepwise control values shall be established by the Contractor and necessary actions shall be taken. ~~as follows:~~

The Contractor shall provide the following three critical limits in its design of the Temporary Works, and shall take an appropriate action when any critical limit is being reached through the monitoring:

(i) Primary ~~control value:~~ ~~limis:~~

~~When this value is reached,~~ When a value of measurement is reached to this limit, the Contractor shall increase the incidence and degree of care over inspections and commence preparing countermeasures which will be implemented if and when the measurement value reaches the secondary control value and obtain the Engineer's consent for such countermeasures.

The Contractor shall submit the measured values on a weekly basis to the Engineer unless otherwise instructed by the Engineer.

(ii) Secondary ~~control value:~~ ~~limis:~~

~~When this value is reached and unless otherwise instructed by the Engineer,~~ When a value of measurement is reached to this limit, the Contractor shall stop the relevant part of the Works and implement the countermeasures.

(iii) Control limit ~~value:~~

~~When this value is reached,~~ When a value of measurement is reached to this limit, the Contractor shall immediately stop the relevant part of the Works, advise all affected persons, prohibit entry of any unauthorised persons to the affected area(s), take radical measures to prevent failure, review and revise the Method Statement and Safety Plan, and comply with the Engineer's Instructions before proceeding.

(13) Contract Compliance

Notwithstanding the requirements of this subclause of JSSS, the Contractor is reminded of his overall responsibility under the Contract in respect of damage to property.

The Contractor shall satisfy himself that the monitoring criteria and requirements specified above, or in other respective Chapters of JSSS and/or in the Particular Safety Specification, are sufficient to comply with his obligations under the Contract and he shall take any additional measures necessary to avoid damage to property.

2.2 RISK CONTROL AROUND THE SITE

2.2.1. General

- (1) The Contractor is reminded of his obligations under GC 4.8 [*Safety Procedures*] and GC 4.22 [*Security of the Site*] to keep any unauthorised persons off the Site, and without prejudice to such obligations the Contractor shall take all necessary further measures under this Section to prevent any such unauthorised persons (including third parties, neighbours and particularly children) who may for example be living or working around the boundary of the Site or adjacent thereto, from entering the Site.
- (2) The Contractor shall inform the Engineer and request that the Employer takes necessary action including removal of any third parties and/or neighbours who may establish themselves outside the Site along and for example against the Site boundary during the Time for Completion of the Works for the potential purpose of accessing the Site.
- (3) In addition to taking necessary action to keep any unauthorised persons off the Site the Contractor shall fully inform the local police force and if necessary request their assistance to remove any trespassers from the Site.
- (4) Such measures shall include (but are not restricted to) the following requirements of this Section.
- (5) The Contractor shall also prevent access to the Site by any persons, including Contractor's and Employer's Personnel and any others who are under the influence of drink or drugs and also to prevent alcohol and drugs being brought onto the Site.

2.2.2. Secure Working Area Perimeter

- (1) Unless otherwise specified in the Particular Safety Specification, the Contractor shall:
 - (a) Enclose the perimeter of all working areas with secure fencing to prevent access to the Site by unauthorised persons;
 - (b) Maintain all such fencing in good condition, until such fencing is no longer needed and reinstate all affected areas;
 - (c) Provide secure entry points with lockable gates or barrier; and
 - (d) Provide and maintain signs clearly advising/warning against entry.
 - (e) Provide watchmen and lighting where, when and to the extent necessary to apprehend and evict any unauthorised persons (particularly children) from the working area, where such persons have breached the Site Perimeter and working area perimeter fencing.
- (2) Unless otherwise specified in the Particular Safety Specification, working area perimeter fencing shall be temporary, constructed of new and durable materials and fit for the purpose intended.
- (3) Full details of working area perimeter fencing including scope, dimensions and specifications shall be given in the Method Statement.
- (4) The Contractor shall provide fall prevention measures such as temporary covers or barriers, with lighting and warning signs for any excavations outside the working area perimeter.

2.2.3. Measures for Road Occupation

- (1) When the Contractor carries out work on, in or under a public road, or uses it for access to the Site, prior to commencement of any such work and based on the prior coordination with the relevant authorities by the Employer, in order to ensure safe and smooth traffic flow on the road, the Contractor shall:
 - (a) Prepare a road usage plan and submit it to the relevant authorities, and obtain

- necessary permits, prior to road use;
- (b) Obtain the approval **and necessary permits of** the relevant authorities before any road closure, diversion or other traffic restrictions are applied;
- (c) Take necessary measures to **ensure** safe and smooth traffic flow on the road during the entire road usage period; and
- (d) Take safety measures specified in JSSS 2.2.2 [Secure Working Area Perimeter].**

- (2) Unless otherwise instructed by the Engineer, the Contractor shall provide a Spotter (refer to **JSSS 2.4 [Spotters, Flagmen and the like]** full time upon the Works (including all non-working periods) so that the Contractor's Personnel and the general public including road users, pedestrians and all others are effectively informed, controlled and protected against accident.

2.2.4. Temporary Road Signs

- (1) For disseminating necessary information on roads adjacent to the Site, the Contractor shall:
 - (a) Provide standard road signs in the same colours and format as those used by the relevant authorities in the Country such as construction signs, direction, speed restriction, detour and roadwork signs;
 - (b) Signs shall be set in suitable places so as to give due warning, information and guidance to road-users and pedestrians alike; and
 - (c) Signs shall be fit for purpose, fixed firmly so as not to break, fall or otherwise be damaged due to vibration, wind or other natural causes.
- (2) Maintain the various signs regularly, including repairing, painting and cleaning. **Ensure that all** are clearly visible, well-lit or made of reflective materials so that they can be seen clearly from a distance at night.

2.2.5. Traffic Accident Prevention at Site Entrance

- (1) In order to prevent traffic accidents occurring at or near the Site entrance, the Contractor shall:
 - (a) Provide warning signs adjacent to the Site entrance to inform drivers on the public road that the Site entrance exists and to inform of the possible emergence of construction traffic/equipment;
 - (b) Provide temporary traffic signals or Spotters for safe control of traffic (including construction traffic) and Contractor's Equipment, Contractor's Personnel and the general public including road users, pedestrians and all others to protect against accident;
 - (c) Provide designated areas for anyone entering the Site to board or be discharged from public and private transport;**
 - (d) Provide pedestrian crossings, manned or with traffic signals; and**
 - (e) Prevent vehicles entering or exiting the Site carrying persons in the back of trucks, pick-ups or the like.**
- (2) Priority shall be given to pedestrians and passing vehicles at the entrance.

2.2.6. Community Relations

- (1) In order to maintain communications and improve safety for the local community near to the Site, the Contractor shall:
 - (a) Cooperate with the Employer and assist in dissemination of comprehensive information about the Project to the nearby **community;** and

- (b) **If so required by the Particular Safety Specification,** Conduct traffic safety and awareness activities for the local community.
- (2) The Contractor shall ensure that all Contractor's Personnel are informed of the safety rules and any precautions regarding the safe passage of construction vehicles/equipment especially when children are arriving at or leaving from school.
- (3) The Contractor shall report immediately to the Engineer if the local community raises any complaints or issues any requests to the Contractor.

2.3 PROHIBITION OF ENTRY – DANGEROUS WORK

2.3.1. General

- (1) The Contractor shall prohibit unauthorised personnel from entering areas where Dangerous Work is being undertaken
- (2) For general requirements of Dangerous work refer to JSSS 1.22 [Dangerous Work].
- (3) “Unauthorised personnel” in this context shall mean Contractor's Personnel, Employer's Personnel and any other persons who have not been properly trained or who are not properly equipped with PPE (including rescue equipment) and who are not carrying and displaying an official permit issued to them by the HSO, for that specific work place in accordance with JSSS 1.23 [Permit to Work System].
- (4) Workers assigned to Dangerous Work shall be subject to the Permit to Work System described in JSSS 1.23 [Permit to Work System].

2.3.2. Demarcation and Requirements

- (1) The Contractor shall clearly demarcate all areas where Dangerous Work is being carried out by the use of appropriate fencing, barriers, signage and lighting and shall control access to such areas with the full-time assignment of a Spotter.
- (2) The Spotter shall be established outside the working area, and shall prevent the entry of unauthorised personnel and shall constantly communicate with and monitor the safety of assigned workers. The Spotter shall be equipped with radio or other efficient means of communication to act as a liaison with other relevant Contractor's Personnel.
- (3) No-one, no matter their position of authority, should be allowed to enter, if not so authorised to do so and the Contractor shall ensure that Spotters do not face any adverse repercussions because of a refusal to allow access.

2.3.3. Examples of Dangerous Work

For clarity “Dangerous Work” shall also include:

- (1) The detection, safe removal and disposal of Unexploded Ordnance as referred to in JSSS 1.38 [Unexploded Ordnance (UXO)].
- (2) The delivery, storage and/or use of harmful, dangerous or explosive materials, chemicals, gases or the like to be used in the Works or for use in or which are the product of the manufacturing or treatment process of the finished Works or in Operational Areas.
- (3) Welding work, hot cutting work or demolition work.
- (4) Work in areas where Contractor's Personnel are already performing work that may become more hazardous if anyone other than authorised personnel enter, for example scaffolding erection, use and dismantling, and areas where Contractor's Equipment is operating and the HSO considers there to be a risk of any accident.
- (5) Work in areas where very hot or cold objects are being handled and/or the working area itself is extremely hot or cold.
- (6) Work in areas where there is potential exposure to harmful radiation or ultrasound.
- (7) Work in areas where the concentration of gases, dust and any other dangerous or harmful materials exceed the limits specified in JSSS 2.1 [Work Environment].
- (8) Work in areas where Permanent Works or Temporary Works have not been performed completely or properly and/or which are therefore unsound, unstable or unsafe.
- (9) Work in areas under, within or adjacent to existing buildings, roads, bridges or other structures which are unstable and/or unsafe and which pose risks to safety unless additional support and strengthening measures are implemented.

- (10) Work or work areas which may have been damaged and otherwise rendered dangerous by adverse climatic, natural or seismic conditions.

2.4 SPOTTERS, FLAGMEN AND THE LIKE

2.4.1. Definitions

In accordance with the definition provided in JSSS Annex1.1 [Definitions and Abbreviations], a reference to either of “Spotter” or “Flagman” in JSSS shall be deemed to include a reference to the other or both and therefore references in this Chapter are to Spotters, which shall be deemed to include both.

2.4.2. Duties

Duties include for example:

- (1) Preventing unauthorised personnel from entering areas where Dangerous Work is being carried out.
- (2) Giving appropriate guidance and signals during operation of Contractor’s Equipment to prevent the equipment tipping, overturning or falling.
- (3) Giving appropriate guidance and signals to prevent Contractor’s Personnel from being struck or pinned by Contractor’s Equipment.
- (4) Assisting drivers of vehicles including trucks and operators of other Contractor’s Equipment in positioning their vehicles particularly when manoeuvring.
- (5) Directing operators and drivers to prevent Contractor’s Personnel, Contractor’s Equipment, Goods in transit, transport and the like from coming into contact with Overhead Services as defined in JSSS Chapter 3 [Existing Underground, Concealed and Overhead Services] when working within close proximity and preventing same from encroaching upon minimum allowable distance from Overhead Services.
- (6) Controlling pedestrian and vehicular traffic, Contractor’s Personnel and Contractor’s Equipment on roads and footpaths on or adjacent to the Site, adjacent to buildings, Operational Areas, places with poor visibility, slopes and vertical drops, places where there is risk of falling or landslide and places where excavation and transporting equipment perform excavation works close to workers.
- (7) Monitoring working locations and conditions and preventing Contractor’s Personnel, Employer’s Personnel and any other persons who are entitled to be on the Site and other places (if any) where the Works are being executed, from entering areas where Dangerous Work is being carried out or where there is any risk of potential injury and accident.
- (8) Any other similar duties and assistance.

2.4.3. Placement

- (1) The Contractor shall provide Spotters as appropriate to the Site situation and the work methods employed.
- (2) The Contractor shall ensure that the Spotters are informed about the Site conditions and accident prevention.

2.4.4. Safety

The Contractor shall:

- (1) Ensure the safety of Spotters when directing vehicles or Contractor’s Equipment.
- (2) Ensure that Spotters and drivers agree on hand signals before assisting with vehicle manoeuvring.
- (3) Instruct Spotters to maintain visual contact at all times with the driver during vehicle manoeuvring.
- (4) Instruct drivers to stop manoeuvring immediately if they lose sight of the Spotter.

- (5) Not give Spotters additional duties while they are already acting as Spotters.
- (6) Instruct Spotters not to use personal mobile phones, personal headphones, or other items which could pose a distraction during spotting activities.
- (7) Provide Spotters with high-visibility clothing, especially during night operations.

2.4.5. Signals

- (1) To avoid the risk of injury to the Contractor's Personnel when operating Contractor's Equipment, the Contractor shall establish a standardised signal system and appoint a Spotter to give necessary signals to the Contractor's Personnel.
- (2) The Contractor shall ensure that all Contractor's Personnel understand and comply with the signals.
- (3) The Contractor shall inform and remind all Contractor's Personnel including those designated as Spotters, of the established standardised signal system as follows:
 - (a) By training all personnel when they first start work at the Site;
 - (b) By re-confirming with the all personnel in the TBM before the start of work each day; and
 - (c) By posting signboards on Site where required showing the standardised signals and placing a smaller-sized sticker version directly on the concerned Contractor's Equipment.

2.4.6. Qualification of Personnel

The Contractor shall ensure that all Spotters possess sufficient experience and ability and are adequately trained and supervised to perform their duties.

2.4.7. Communication Tools

The Contractor shall, when necessary, provide and maintain any necessary equipment such as hand-held radios, to ensure effective and safe communications and train all Spotters in their use.

2.4.8. PPE

The Contractor shall ensure that all Spotters are provided with PPE including hats, whistles, high visibility jackets, flags, illuminated batons, etc. to safely and adequately perform their duties.

2.5 FALL PREVENTION

2.5.1. General Items

- (1) By reference to JSSS 1.4 [*Compliance with JSSS and Other Regulations*], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for fall prevention complying with the technical requirements specified in OSHA, Subpart E Personal Protective and Life Saving Equipment, and Subpart M – Fall Protection of “Part 1926 - Safety and Health Regulations for Construction” and as follows:
 - (a) Requirements relating to fall protection for workers on scaffolds in Subpart L;
 - (b) Requirements relating to fall protection for workers on cranes and derricks in Subpart CC;
 - (c) Fall protection requirements for workers performing steel erection work (except for towers and tanks) in Subpart R;
 - (d) Requirements relating to fall protection for workers on certain types of equipment used in tunnelling operations, underground construction, caissons, cofferdams and compressed air in Subpart S;
 - (e) Requirements relating to fall protection for workers engaged on the erection of tanks and communication and broadcast towers in Subpart E §1926.105 (Safety Nets);
 - (f) Requirements relating to fall protection for workers on aerial lifts or poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment in Subpart V, Electric Power Transmission and Distribution; and
 - (g) Requirements relating to fall protection for employees working on stairways and ladders are provided in Subpart X, Stairways and Ladders.
- (2) This Section provides fall prevention solutions for a typical range of example circumstances but this is not intended to be restrictive in extent. The Contractor shall provide fall prevention solutions wherever demanded by the nature of the particular part of the Works.
- (3) As a general rule, the Contractor shall take fall restraint system (PFRS) measures wherever practicable rather than fall arrest system (PFAS) measures.
- (4) JSSS 2.5 [*Fall Prevention*] shall be read in conjunction with other respective parts of JSSS.

2.5.2. Height Thresholds

The threshold for fall protection in construction work is 2 m.

The Contractor shall provide fall protection for all personnel, removing all fall hazards whenever any personnel are working 2 m or more above a lower level.

2.5.3. Facilities for Ascending and Descending

When carrying out work at heights of 2 m or more, the Contractor shall provide facilities that enable the Contractor’s Personnel to safely ascend and descend from such work levels.

2.5.4. Risk Assessments

- (1) Where there is any risk of fall for any part of the Works at the Site, the Contractor shall conduct a pre-assessment of the various types of fall protection systems to be used and the selected alternatives shall be shown in the Safety Plan.

- (1) In advance of the commencement of any parts of the Works, the Contractor shall carry out such further risk assessment as necessary, including checking the following and recording the results:
 - (a) Work areas and the conditions of adjacent areas;
 - (b) Position, condition and surroundings at each anchorage for separately securing working line, lifeline or nets;
 - (c) Status of access leading to work areas and any anchorages; and,
 - (d) The presence or absence of protrusions where there is a risk of cutting or chafing of working line or lifeline or other fall prevention systems and their position and condition.

2.5.5. Handrails

- (1) The Contractor shall provide handrails at places where there is risk of fall.
- (2) Handrails shall be complete with top-rails, minimum 85 cm high and mid-rails at a height of 35 - 50 cm.
- (3) Top-rails shall be designed to withstand 90 kg. of horizontal force and mid-rails 70 kg. of horizontal force and sufficient uprights shall be provided to sustain these forces.
- (4) Handrails shall be fit for purpose, of rigid and sound condition, securely fixed, without excessive corrosion, deformity or damage of any kind.
- (5) If handrails are temporarily removed for example to permit work to be carried out, the Contractor shall provide alternative safety measures including for example:
 - (a) Displaying appropriate warning signs;
 - (b) Assigning a Spotter to direct non-essential Contractor's Personnel away;
 - (c) Providing alternative fall prevention systems to Contractor's Personnel in that area including for example PFRS or PFAS or safety nets;
 - (d) Prohibiting entry to the working area of any unauthorised Contractor's Personnel; and
 - (e) Handrails shall be restored immediately after the necessity for removal has ended.

2.5.6. Toeboards

- (1) Toeboards shall be provided to all handrails to prevent risk of Falling Objects.
- (2) Toeboards shall be minimum 10cm high from top edge to the level of the working platform, runway or ramp.
- (3) Where material, is piled to such height that a 10cm toeboard does not provide protection, panelling from floor to mid-rail, or to top-rail shall be provided.

2.5.7. Temporary Access Around the Site

(1) Walkways and Passageways

For the purposes of interpretation:

“Walkways” mean pedestrian footpaths at ground level or ramped for the use of Contractor's Personnel.

“Passageways” are the same as walkways but are covered by a roof and maybe also have sides in order to protect all personnel from falling objects or adjacent activities.

(2) Safe Routes

The Contractor shall provide walkways and passageways leading to, within and around the Site and any working areas within the Site.

These shall be designed and constructed to ensure the safe passage of Contractor's Personnel and shall be provided with temporary lighting and effectively maintained at all times.

The Contractor shall display signs clearly indicating the location, intended use and any restrictions and extent with directions so that the Contractor's Personnel can adhere to the routes.

Other construction activities will be prevented from obstructing these routes.

(3) Handrails

At any point where there may be a risk of Contractor's Personnel falling from temporary walkways and passageways, the Contractor shall provide handrails as specified in JSSS 2.5.5 [Handrails].

Alternatively, the Contractor shall provide fall prevention equipment with the same or better functionality.

2.5.8. Preventing Falls by Providing Temporary Working Platforms

(1) The Contractor shall provide a temporary working platform where Contractor's Personnel are carrying out any operation at a height 2 m or more above the base and where there is any risk that Contractor's Personnel may fall.

(2) Temporary Working Platforms shall be constructed from steel tubular scaffolding, system scaffolding or other safe and secure types.

(3) Temporary working platforms shall always have handrails.

(4) If handrails are ever temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 [Handrails]

2.5.9. Preventing Falls from the Ends and Openings of Working Platforms

(1) The Contractor shall take measures to prevent any falls from ends, edges and around any openings in working platforms.

(2) The Contractor shall provide handrails to all ends, edges and openings.

(3) Alternatively, the Contractor may place covers over any openings, each of sound construction and designed with a bearing capacity of at least twice any likely superimposed load, including any materials, Plant or Contractor's Personnel.

(4) If for any reason it is not possible to provide handrails around working areas, or to provide covers or when covers are temporarily removed for construction purposes, the Contractor shall take the measures described in JSSS 2.5.5 [Handrails]

2.5.10. Measures for Preventing Falls during Excavation Work

The Contractor shall take all necessary measures to prevent falls during excavation work including for example:

(1) Providing fall prevention systems including temporary handrails or barriers, PFRS, PFAS or rope access.

(2) Taking appropriate measures to ensure that earth slopes do not collapse due to the fixing of any fall prevention system or to any contact of the ropes with the slope surfaces.

(3) Providing safe measures to allow Contractor's Personnel to escape from or move around any excavated slope. If it is not possible to take such measures due to the nature of the work, the Contractor shall install main ropes and have Contractor's Personnel use PFRS

or PFAS. In such case, the main ropes shall be anchored securely to prevent them becoming loose or detached.

- (4) Installing handrails where the slope shoulder is used as a walkway or passageway.
- (5) Installing safe crossings over trench excavations at a maximum of 30m intervals and prohibiting all Contractor's Personnel from crossing on the shoring system.
- (6) Providing safe means of access and egress using stairways, ladders, ramps and the like to all excavations such as trench, basement, footing excavations, which are 1.2 m or more in depth, generally requiring no more than 7.5m of lateral travel for Contractor's Personnel.
- (7) Prohibit all Contractor's Personnel from crossing on struts of Earthwork-Support.

2.5.11. Measures for Preventing Falls during Rope Access Work

- (1) The Contractor shall take all necessary measures to prevent falls during rope access work including for example:
 - (a) Installing a lifeline to which the PFAS is attached in addition to the working line to which the PFRS is attached; and
 - (b) Ensuring that the working line, lifeline and harness have sufficient strength and that they have not suffered any damage, abrasion, deformation or corrosion and that the Contractor's Personnel are trained in the use and that they use them properly.
- (2) In relation with the working line, lifeline and harness, the Contractor shall ensure that:
 - (a) The working line and lifeline are securely anchored to independent rigid supports vertically above the work location and cannot be detached;
 - (b) The working line and lifeline are of sufficient length to allow the Contractor's Personnel to move up and down safely;
 - (c) Measures have been taken to prevent cutting or chafing, such as providing covers, where there is a risk that the working line or lifeline may be cut or chafed due to protrusions;
 - (d) That the working line is anchored to two or more independent strong supports; and
 - (e) The positioning device shall be securely connected to the working line with connectors and the connecting devices shall be compatible with the working line used.
- (3) The Contractor shall provide the following particular information in the Safety Plan and shall ensure that all Contractor's Personnel engaged in rope work are fully qualified and informed when doing so, including advising them of:
 - (a) Location of each anchorage used to secure the working line and lifeline;
 - (b) Types and strengths of the working line and lifeline to be used;
 - (c) Lengths of the working line and lifeline to be used;
 - (d) Protrusions where the ropes may be cut or chafed and measures to prevent this; and
 - (e) Measures to prevent Contractor's Personnel engaged in securing the working line and lifeline to the anchorages from falling.
- (4) The Contractor shall also provide measures to prevent the risk of accident to any personnel from Falling Objects; by using covered passageways and PPE.
- (5) The Contractor shall appoint an Operation Leader who shall work with the rope work

team at all times throughout their assignment and direct the work based on the Safety Plan and perform the following duties:

- (a) Inform all Contractor's Personnel of the content of the Method Statement and Safety Plan before commencement of the work;
- (b) Check all equipment to be used on the day prior to commencement of the work, and repair, maintain or replace any equipment immediately if any defect is identified;
- (c) Permit the Contractor's Personnel to commence work only after the measures have been taken to provide all working lines, lifelines, PFRS, PFAS and PPE; and
- (d) Ensure Contractor's Personnel use PFRS, FAS correctly, and, have them fix the PFAS to the life lines.

2.5.12. Further Measures for Contractor's Personnel

The Contractor shall take all necessary further measures to prevent falls during the Works including, for example, taking the following measures before any work commences:

- (1) Conduct safety induction and education courses regarding fall risks for all Contractor's Personnel who shall work on locations and operations where there is a risk of falling.
- (2) Prohibit the unauthorised removal of any fall prevention equipment and educate Contractor's Personnel on the dangers of this action.
- (3) Educate Contractor's Personnel on the proper storage and management of all safety equipment, including for example PFRS, PFAS and PPE.
- (4) Stop the work if there is a risk of bad weather such as strong wind, heavy rain, or snow.

2.5.13. PPE for Fall Prevention

The Contractor shall comply with the following requirements when Contractor's Personnel are subject to fall risks:

(1) The Contractor shall provide PFRS as follows:

- (a) PFRS shall be the same as PFAS specified below but designed to restrict the movement of workers and prevent them from reaching the edge of or any openings in the working area and therefore eliminating the risk of a fall; and
- (b) PPE for PFRS shall comprise of either a Safety Belt or Safety Harness, together with an anchorage, connectors and other necessary equipment, typically including a lanyard, lifeline and other devices.

(2) The Contractor shall provide PFAS as follows:

- (a) The PFAS shall be the full harness type and shall comprise of a body harness, connectors, lanyard, deceleration device, lifeline, anchorage, or suitable combination of these;
- (b) The use of a Safety Belt for PFAS is prohibited except where there is any risk of the Contractor's Personnel hitting the lower surface when the full harness type is used and the total fall clearance distance calculated as below, is less than the distance between the point at which a worker would be anchored and any lower level;

The total fall clearance distance for PFAS with a shock-absorbing lanyard is calculated as the total of free fall distance, deceleration distance, D-ring shift, back D-ring height, and safety factor. (Refer to OSHA Technical Manual General Information, Section V: Chapter 4 Fall Protection in Construction, III. Measurements for Assessing Fall Hazards and Controls, A. Total Fall Clearance Distance for PFAS.)

- (c) PFAS shall withstand the total force exerted on the system by the Contractor's Personnel falling, including the weight of the system itself; and
 - (d) For shock absorbers, an appropriate specification and type shall be selected according to the free fall distance calculated from the Contractor's Personnel's working position (height of anchor point, length of lanyard, etc.).
- (3) The PFRS and PFAS shall bear the name of the manufacturer and the date of manufacture and shall be easily visible.
- (4) Inspection of any safety equipment
- Before starting work using PFRS or PFAS, the systems and anchorages to which the systems are to be attached shall be inspected and defective, damaged, worn-out or missing parts or components shall be replaced.

2.5.14. Portable Ladders and Stepladders

For further requirements, refer to JSSS 6.4 [*Walkways, Ladders and Stepladders*]

2.5.15. Work on Roofs and Other Areas

- (1) Where Contractor's Personnel are carrying out work on roof at a height of 2 m or more, PFRS or PFAS shall be used with secure and safe anchorages.
- (2) The Contractor shall, ensure that PFRS or PFAS are inspected before each use and declared safe for use with no defective, damaged, worn-out or missing parts or components.
- (3) Prevention of Fall Risks on Floors, Fragile Roofs and Other Surfaces

When working on, accessing or crossing, floor or roof areas (including uncompleted areas under construction), or fragile roofs such as those covered with slates, tiles or other non-loadbearing coverings or where there is any risk of breaking and or falling through such areas, the Contractor shall provide continuous bearing boards for workers to walk on, with a minimum width of 60 cm or sufficiently wider to provide safe transit and where necessary to spread the bearing load on the surface and avoid penetration. The boards shall be fixed together and secured to the underlying surface by tying with ropes or clips to prevent any movement.

Unless otherwise approved by the HSO, handrails shall be provided to one or both sides.

If the underlying surface or roofing is too fragile for such measures and access is required, the Contractor shall provide an independent scaffolding boarded walkway with handrails both sides, which does not bear upon the existing roof but that is supported independently by a scaffolding structure.

- (4) Demolition or Alteration of Buildings and Structures

When carrying out demolition or alteration of buildings or structures and where there is a risk of Contractor's Personnel falling, the Contractor shall take the following measures:

- (a) Appoint an Operation Leader to be engaged on the work;
- (b) Safely supervise the work; and
- (c) Inform and train Contractor's Personnel engaged in the said work so that they are aware in advance of the work methods and procedures.

2.5.16. Safety Nets

- (1) The Contractor shall provide safety nets when workplaces are more than 7.50m above the lower ground level or water surface level and where the use of another type of fall prevention system is impractical or has been removed.

- (2) Operations shall not be undertaken until the net is in place and has been inspected and tested.
- (3) Nets shall extend 2.5m beyond the edge of the work surface where Contractor's Personnel may be at risk and shall be installed as close under the working surface as practical but in no case more than 7.50m below such work surface.
- (4) Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.
- (5) The mesh size of nets shall not exceed 15 cm by 15 cm. All new nets shall bear a label of proof test from the manufacturer that they can withstand 23,700 Nm minimum impact resistance. Edge ropes shall provide a minimum breaking strength of 2,270kg.
- (6) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.

2.6 FALLING OBJECTS

2.6.1. General

The Contactor shall take all necessary measures to avoid danger and prevent damage and injury to Contractor's Personnel, Employer's Personnel and any other persons including third parties that are on or adjacent to or in the vicinity of the Site whether connected with the Works or otherwise, and who may be at risk from Falling Objects.

In general, this shall be accomplished by:

- (1) Providing secure temporary barriers to prevent or capture Falling Objects, designed by the Contractor to be of sufficient strength to capture all Falling Objects without perforating and where necessary shall be of an aesthetic design to be approved by the Engineer.
- (2) Providing a safe means of raising and lowering Goods, tools, waste and debris.
- (3) Providing an exclusion zone with temporary barriers and all other necessary measures to prevent persons and traffic from entering areas where Falling Objects could be a risk, including providing pedestrian and traffic diversions.

Exclusion zone shall also be provided where protective mesh sheets or toeboard are not installed or where they are temporarily removed due to the nature of the work

- (4) Using PPE.
- (5) Providing coloured warning tape, barriers and signage warning of "DANGER FALLING OBJECTS" in addition to all other preventive measures.

2.6.2. General Preventive Measures

- (1) All horizontal boarded areas of scaffolding shall be provided with substantial and continuous toeboards to all edges in accordance with JSSS 2.5.6 [Toeboards].
- (2) Mesh sheet (debris net) shall be provided under and around all edges to cover all openings of scaffolding horizontal boarded areas.
- (3) Continuous and secure debris nets shall be provided to vertical sides of all scaffolding or openings of external walls where there is no scaffolding.
- (4) Safe passageways with secure roof and walls shall be provided over entrances and exits.
- (5) Protective canopies, safety fans or projecting shelves shall be provided to the edge of all roofs and to all vertical faces wherever there is a risk particularly over entrance and exits, working areas, walkways, passageways, footpaths and roads, including those on areas beyond the Site boundary.
- (6) Protective roofs shall be provided wherever there is a risk over working areas, passageways, footpaths and roads.
- (7) All protective structures including roofs, canopies, safety fans, projecting shelves over walkways and passageways shall be fit for the purpose intended and provide a secure protective barrier capable of supporting Falling Objects and of sufficient size and dimensions to give full coverage and protection.
- (8) Personnel must be prevented from entering any areas below scaffolding where there is a risk of Falling Objects through the provision of barriers and signage.
- (9) If any protection is temporarily removed then a Spotter shall be assigned to prevent personnel entering the hazard area.
- (10) A Spotter shall also be assigned to direct traffic and pedestrians where diversions are necessary.
- (11) Use and control of mesh sheets to prevent objects from falling shall be as follows;

- (a) Sheet shall have a mesh size of 12 mm or less or a mesh size corresponding to the size of expected Falling Objects;
 - (b) Sheet shall comply with BS 7955, composed of polyester material, reinforced as necessary to withstand the impact load of Falling Objects;
 - (c) Sheets that are damaged or which contain any irregularity shall not be used;
 - (d) If sheet is removed temporarily to suit the work operation, measures must be applied to avoid any risk of accident whilst it is removed and it must be restored immediately after the work operation is completed;
 - (e) Mesh sheets shall be inspected at least once a week and replaced immediately if any damage is found; and
 - (f) If there are any Falling Objects on the mesh sheet, these shall be removed before any work starts. The occurrence shall be reported to and investigated by the HSO to prevent any reoccurrence.
- (12) When the work place is close to public or private areas, roads, footpaths, buildings or houses and the like along or outside the Site boundary and where there is any risk that Falling Objects could endanger the safety of traffic and third parties in such areas, and in addition to the above preventive measures, the Contractor shall take all responsibility, make all necessary arrangements with such third parties and/or all relevant authorities, insure, serve all notices, pay all charges and provide all necessary protective facilities and services including:
- (a) Provision of mesh screens, safety fans, projecting shelves, temporary roofs over walkways, passageways or the like to protect such public or private areas, roads, footpaths, buildings or houses and all property, traffic, pedestrians and other persons thereon; and
 - (b) Safe and efficient diversion of all traffic and persons (in addition to the above or if the above measures cannot be taken) by providing all temporary barriers, signals, lighting and signs and placing a Spotter to direct traffic and pedestrians.

2.6.3. Falling Tools and Equipment

- (1) The Contractor shall take appropriate measures to avoid the risk of injury or damage arising from dropped or falling tools including for example the following:
- (a) Securing tools and materials;
 - (b) Use tool holsters, pouches, lanyards, etc.;
 - (c) Use debris nets, catch platforms or canopies to catch or deflect falling tools; and
 - (d) Use tethered tools, either with built-in connection points placed by the manufacturer or retrofitted connection points and connect tools to a lanyard. Tools can either be connected to a worker through a tool belt, harness or wristband, or anchored to a fixed structure.

2.6.4. Preventive Measures against Dust and Windblown Debris

- (1) For work where there is a risk of ejected or windblown dust and debris, (for example from stone crushing, concrete batching, cutting and grinding operations and the like), the Contractor shall:
- (a) Enclose areas where such operations are taking place and provide protective screens or covers on storage areas;
 - (b) Comply with the provisions of JSSS 4.2.2 [Defects and Repair During Operation] for small tools including equipment condition, use of covers and safety guards and procedures for preventing danger due to tool breakage etc.; and

- (c) Ensure that workers use appropriate PPE such as head, face and eye protection to prevent accident or injury.

(2) In strong winds and storms, the Contractor shall take measures to prevent wind-borne materials, etc. according to JSSS 2.7.3 [Measures for Strong Wind and Storms].

2.6.5. Preventive Measures against Dropping Objects

(1) The Contractor shall prohibit Contractor's Personnel from throwing or dropping objects (e.g. Scaffolding clips), generally and in no event from heights of 3m or above.

(2) The Contractor shall use a crane to bring objects down from heights of 3m or above. Alternatively, the Contractor may provide enclosed chutes to bring down objects and in addition, shall prohibit entry to the chute area or assign a Spotter.

(3) Chutes shall be designed to prevent objects being scattered over the surrounding area.

2.6.6. Prevention of Accumulation of Goods at Height

(1) The Contractor shall prohibit the accumulation and storage of Goods at high levels particularly on scaffolding and in locations where such Goods are at any risk of falling due to the effect of wind, vibration, water or gradient.

(2) Goods shall generally not be stored or allowed to accumulate within 1m of platform or work floor edges and openings or the like.

(3) When temporarily stored at height, Goods shall be restrained by ropes or sheets to prevent them from falling or slipping.

(4) Goods that are likely to scatter or spread, shall be suitably constrained by tying, boxing or bagging.

2.6.5 Working Above or Below Others

(1) As a general and prevailing rule, the Contractor shall prohibit his workers from working concurrently above or below other workers. To achieve this the Contractor shall carefully coordinate the work location, content, timing of the work operations between his assigned workers.

(2) In exceptional circumstances where this is unavoidable due to the nature of the work, the Contractor shall increase the supervision and the safety procedures described in this Section to ensure that the risk from Falling Objects is avoided. Workers shall be given further training, provided with PPE and additional working equipment (e.g. slings for tools, safety nets and/or hanging bags) in order to provide additional protection and a Spotter shall be assigned while such overhead operations are being carried out.

2.6.6 Loose Rock, Boulders and the Like

(1) If loose rock, boulders, trees and the like, are positioned above working areas and where there is any risk that these may pose a danger to Contractor's Personnel or Contractor's Equipment working below, unless otherwise instructed by the Engineer, the Contractor shall carefully remove such items and if necessary:

(a) Propose further safety measures to the Engineer;

(b) Consult with the Engineer and obtain the Engineer's Instructions for the required further measures to be taken, such as installation of temporary protective barriers; and

(c) Prohibiting Contractor's Personnel from entering the working areas until the above items have been removed or the further measures have been taken.

2.7 ADVERSE WEATHER REQUIREMENTS

2.7.1. Preventive Measures

- (1) Whenever adverse climatic conditions render it too dangerous to continue, the Contractor shall stop affected work at the Site, take preventive measures to ensure the safety of all Contractor's Personnel engaged on that work and inform the Engineer accordingly.
- (2) **Before**, during or after adverse climatic conditions, the Contractor shall:
 - (a) Stop work at heights if there is any danger of falling;
 - (b) Stop work if there is a possibility of that such work may be dangerous due to possibility of electrical shock, slippery conditions or poor visibility and the like during rain, snow or fog, and inform the Engineer accordingly;
 - (c) Inspect the Works and all Goods intended to be incorporated in the Works or used thereon (including any temporary structures) for damage and risk of causing any danger before resuming work. If any damage or risk is found, the Contractor shall immediately take necessary action to prohibit entry in accordance with JSSS 2.3 [*Prohibition of Entry – Dangerous Work*], inform the Engineer accordingly and request his instructions; and
 - (d) Inspect Goods for damage and risk of any danger before resuming work. If any damage and risk is found, use Contractor's Equipment and Temporary Works only after making the necessary repairs **or replacement**.

2.7.2. Measures for Heavy Rain

For heavy rainfall at the Site and the surrounding area, the Contractor shall:

- (1) Take measures to prohibit entry in accordance with JSSS 2.3 [*Prohibition of Entry – Dangerous Work*] at the following locations:
 - (a) Places where landslides could be anticipated;
 - (b) Places where there is a risk of flow of material and equipment and soil runoff; and
 - (c) Places where there is a risk of damage due to flash floods, lake or river flooding.
- (2) Take measures such as evacuation of Contractor's Personnel and Goods to a safe place for preventing them from being submerged, washed away or overturning due to loosening of the ground.
- (3) Take measures to protect temporary facilities from damage arising out of flooding or landslide, such as initially constructing them in safe locations, moving them to a safe place, reinforcing the ground and the facilities, diverting or drawing water from behind the facilities to prevent collapse.

2.7.3. Measures for Strong Wind and Storms

For strong wind and storms at the Site and the surrounding area, the Contractor shall:

- (1) Take measures to prevent capsizing, **overturn** or movement of Contractor's Equipment particularly high equipment such as cranes, pile drivers, **pile drilling rigs and the like**.
Where possible, lower the boom of high equipment and tie to a secure anchor with steel cable to ensure stability and prevent any risk of overturning.
- (2) Always store and/or if necessary evacuate Goods to a sufficient distance away from overhead power and communication lines to prevent damage and injury.
- (3) Take the following measures for scaffolding and working platforms.
 - (a) Remove or furl mesh sheets to reduce wind load;
 - (b) Prevent scaffolding from collapsing or sliding **by dismantling scaffolding or**

- adding or reinforcing wall connectors;
 - (c) **Dismantle or** reinforce scaffolding projecting from buildings by supporting ropes, cables or additional struts and bracing; and
 - (d) Securing Goods on scaffolding, or lowering them to ground level.
- (4) Discontinue work at **a** elevated places.
- (5) Take measures to prevent scattering of Goods, waste and debris.

2.7.4. Measures for Heavy Snow and Ice

For heavy snow or ice at the Site and the surrounding area, the Contractor shall:

- (1) Take fall prevention measures in snow such as setting of poles or red flags to demarcate roads, footpaths and waterways.
- (2) Take fall prevention measures for workers in icy conditions or snow, **by ice or** snow removal on roads, platforms, stairs, ramps, slopes, passages, scaffolding, canopies, safety fans, projecting shelves and the like.
- (3) Remove snow from roofs, canopies and signs, notice boards.
- (4) Prohibit works on scaffolding, working platforms or staging if snow or ice is present except **after** its careful removal.

2.7.5. Measures for Lightning

Where there is any risk that lightning may affect work on or near tall objects, or near explosives or conductive materials, the Contractor shall take the following safety measures:

- (1) The Contractor shall follow the recommendations of OSHA **as described in their Fact Sheet [refer to <https://www.osha.gov/Publications/OSHA3863.pdf>] and** when thunder is heard, or when information is obtained by lightning detector or radio, the Contractor shall ensure that all Contractor's Personnel engaged on outdoor work, immediately cease work and move to a safe shelter namely a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows closed (but not excavators, cranes, tracked or similar types of Contractor's Equipment).
- (2) Contractor's Personnel shall remain in the safe shelter for at least 30 minutes after the last sound of thunder is heard.

2.7.6. Measures for Earthquake and Tsunami

To the extent that time is **available and forewarning is given**, the Contractor shall evacuate workers to **the designated meeting place** in the event of earthquakes or tsunamis when the relevant authority issues a warning for the occurrence or prediction of earthquakes or tsunamis.

2.7.7. Inspection of Temporary Works after Adverse Weather and Earthquake

Following the occurrence of any adverse weather or after any earthquake and before re-commencing any work, the Contractor shall:

- (1) **Perform a visual inspection.**
- (2) **Check all measured values of any instruments to ensure the safety of Temporary Works.**
- (3) **When abnormality is found in instruments, recalibrate or replace them.**
- (4) **If any damage or fault is found in the TW, immediately carry out repair, replacement and/or reinforcement works, as necessary.**
- (5) **Keep the Engineer informed of inspection and monitoring results.**

2.8 FIRE PREVENTION

2.8.1. Fire Prevention and Firefighting Facilities

Unless otherwise specified in the Particular Safety Specification, the Contractor shall take measures and provide facilities for fire prevention and fire-fighting and shall ensure that such measures are readily available and at all times at the Site and at any offices and accommodation for Contractor's and Employer's Personnel.

(1) Fire Response Plan:

The Contractor shall:

- (a) Prepare a Fire Response Plan detailing the proposed fire prevention and fire-fighting measures and facilities and include this as a part of the Safety Plan;
- (b) Designate a person (or persons) responsible for fire prevention, fire-fighting and also for evacuation in the event of a fire;
- (c) Prepare a firefighting training plan as a part of the fire prevention and fire-fighting plan; and
- (d) Carry out all training and keep records of such training in accordance with JSSS 1.20.5 [*Records of Education and Training*].

(2) Fire Response Measures and Facilities:

The Contractor shall:

- (a) Provide fire hoses, hose-reels, fire hydrants and similar equipment, where considered necessary by the HSO;
- (b) Ensure that an adequate temporary water supply is available as and when required;
- (c) Provide fire extinguishers and fire blankets according to the area and purpose of use, such as for ordinary fires, oil fires, electric fires and the like;

Fire extinguishers shall be regularly inspected, refilled, serviced and certified as such by a qualified and independent safety company approved by the Engineer; and
- (d) Prohibit smoking anywhere on the Site other than designated smoking areas, and implement effective fire prevention measures by placing buckets filled with water or sand in smoking and other dangerous areas.

2.8.2. Train Contractors Personnel and ensure that a team or teams is available to respond in the event of a fire and in advance or in place of attendance by any public firefighting service.

2.8.3. Measures for Evacuation

In the event of a fire, the Contractor shall facilitate evacuation by:

- (1) Creating an evacuation route map if necessary and post this in easy-to-see places.
- (2) Display the evacuation routes as necessary at all work places.
- (3) Install multiple evacuation routes and staircases for buildings with 2 or more floors and a capacity of 30 people or more, or in the shafts and for underground work.
- (4) Establish a communication method to inform the Contractor's Personnel, Employer's Personnel and any other persons that are on the Site so that they are aware of danger and that they must evacuate due to a fire.

2.8.4. Management of Flammable and Combustible Materials

By reference to JSSS 1.4 [*Compliance with JSSS and Other Regulations*], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS and

unless otherwise approved by the Engineer, the Contractor shall take necessary measures for fire prevention complying with the technical requirements specified in OSHA Subpart F, Fire Protection and Prevention 1926. 152 for the usage and storage of flammable and combustible materials or 1926. 153 Liquefied petroleum gas (LPG) or other relevant OSHA standards for other flammable or combustible materials and gases, including for example: gasoline, kerosene, light oil, heavy oil, creosote oil, gear oil, cylinder oil, and other lubricating oils and organic solvents such as acetone, toluene, LPG and other gases including oxygen, acetylene etc. (hereinafter collectively referred to as “flammable and combustible materials” in this Section).

In addition, the Contractor shall:

- (1) Appoint a person who is appropriately qualified, skilled and experienced in handling flammable and combustible materials, to be responsible for the storage and handling flammable and combustible materials and notify the name of such person to the Engineer.
- (2) Store flammable and combustible materials in a purpose-built building or compound, fit for the intended purpose, well ventilated and secure, and protecting the stored materials from direct sunlight and extreme heat.
- (3) Take measures to prohibit entry to unauthorised personnel and display signage prohibiting the use of flame.
- (4) Determine handling methods of flammable and combustible materials, which shall be notified to the Engineer, and ensure Contractor's Personnel are fully aware of the methods.
- (5) Provide fire prevention and firefighting facilities appropriate to the stored flammable and combustible materials.

2.8.5. Fire Prevention Measures for Electric and Gas Welding and Gas Cutting

The Contractor shall refer to and comply with JSSS 6.8 [*Electric and Gas Welding and Cutting*] for the fire prevention requirements for electric and gas welding and cutting works.

2.9 PPE AND FIRST AID

2.9.1. PPE

(1) General

- (a) Further to the requirements of JSSS 1.35 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE] the Contractor shall provide all necessary and required PPE free of any charge, to all Contractor's Personnel, ensure that this is used properly, kept in good condition and replaced in the case of being worn-out, lost or damaged;
- (b) PPE shall comply with the additional requirements of this Section;
- (c) The Contractor shall ensure as a minimum and mandatory requirement, that all Contractor's Personnel are provided with the following PPE and the Contractor shall make sure that all Contractor's Personnel wear or use such PPE as appropriate whenever they are on the Site:
 - (i) Head Protection; and
 - (ii) Protective Footwear.
- (d) The following additional PPE shall be provided whenever required by the working environment:
 - (i) Eye and Face Protection;
 - (ii) Ear Protection;
 - (iii) Respiratory Protection;
 - (iv) PPE for PFRS and PFAS (Safety Harnesses, Safety Belts and the like);
 - (v) Gloves; and
 - (vi) Body Protection.
- (e) The particular requirements for PPE are not repeated in each Section of JSSS but appropriate PPE must always be provided by the Contractor.

(2) Additional Inspection, Testing and Maintenance

Further to the requirements of JSSS 1.35.1 [Contractor's Equipment, Temporary Works, Safety Equipment and PPE] and unless otherwise required by the manufacturer or approved by the Engineer:

- (a) Frequently used PPE shall be inspected, tested and maintained at least once a month; and
- (b) Occasionally used PPE shall be inspected before every use and tested and maintained at least once every three months.

The HSO shall also conduct regular checks to ascertain any requirements for the following:

- (a) Inventory and reorder supplies;
- (b) Follow up with the manufacturer on maintenance issues; and
- (c) Schedule training and retraining.

(3) PPE Signage Requirements

- (a) The Contractor shall display signage at specific places at the Site where the wearing of PPE is mandatory;
- (b) Such signage shall include for example:

“Head Protection Must be Worn”

“Eye* Protection Must be Worn”

(* face, ear or other)

(4) Head Protection

Head protection shall protect workers’ heads and necks against injury from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature, reduce the impact from tripping or falling and protect against electric shocks.

Head protection shall ensure a level of performance that is equal to or greater than the following standards:

Table 2.9.1: Applicable Standards for Head Protection

	Standard	Title of Standard
1	JIS T8131	Industrial Safety Helmets
2	ANSI Z89.1	Industrial Head Protection
3	BS EN 397	Industrial Safety Helmets

(5) Protective Footwear

Protective footwear shall protect against foot injury due to crushing by superimposed loads, impact injuries from dropped or Falling Objects, foot injuries from treading on sharp penetrating objects, injuries from electric shock and also shall increase adhesion preventing workers’ from slipping and falling.

Protective Footwear shall have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, electrically insulating or thermally insulating, appropriate footwear shall be selected for the risks identified

Protective footwear shall ensure a level of performance that is equal to or greater than the following standards:

Table 2.9.2: Applicable Standards for Protective Footwear

	Standard	Title of Standard
1	JIS T8101	Protective footwear
2	ASTM F2413	Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear
3	BS EN ISO 20346 BS EN ISO 20349	Personal protective equipment - Protective footwear Personal protective equipment. Footwear protecting against risks in foundries and welding

(6) Eye and Face Protection

Eye and face protection shall protect workers' eyes and face from harmful materials (for example dust, chemicals, liquid splash, flying objects, molten metal, chemicals, gas and steam, extreme light, flashes and hazardous rays, dirt and debris, etc.

Eye and face protection can include safety spectacles, goggles, face masks, face shields, visors and the like. Selected protection shall have the right combination of /impact/dust/splash/molten metal eye and face protection for the task and shall be selected for the risks identified.

Eye and face protection shall ensure a level of performance that is equal to or greater than the following standards:

Table 2.9.3: Applicable Standards for Eye and Face Protection

	Standard	Title of Standard
1	JIS T 8141 JIS T 8142	Personal eye protectors for optical radiations Personal face protectors for welding
2	ANSI Z87.1	American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
3	BS EN 166 BS EN ISO 4007	Personal eye protection. Specifications Personal protective equipment. Eye and face protection. Vocabulary

(7) Ear Protection

Ear protection shall protect workers' hearing against injury from continuous, loud or Intense Noise by providing soundproofing.

The Contractor shall ensure that workers are still able to receive and immediately react to oral instructions and danger warnings when wearing ear protection.

Ear **protection** shall ensure a level of performance that is equal to or greater than the following standards:

Table 2.9.4: Applicable Standards for Ear Protection

	Standard	Title of Standard
1	JIS T 8161	Ear protectors
2	ANSI/ASA S12.6	Methods for Measuring the Real-Ear Attenuation of Hearing Protectors
3	BS EN ISO 4869-1 BS EN ISO 4869-2 BS EN ISO 4869-3	Acoustics. Hearing protectors. Subjective method for the measurement of sound attenuation Acoustics. Hearing protectors. Estimation of effective A-weighted sound pressure levels when hearing protectors are worn Acoustics. Hearing protectors. Measurement of insertion loss of ear-muff type protectors

	BS EN ISO 4869-4	<p>using an acoustic test fixture</p> <p>Acoustics. Hearing protectors. Measurement of effective sound pressure levels for level-dependent sound-restoration ear muffs</p>
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(8) Respiratory Protection Equipment (RPE)

RPE shall protect workers' airways, lungs and related bodily systems against damage and injury from Harmful Substances or from oxygen-deficient atmospheres when other controls are either not possible or insufficient on their own.

Selection and use of RPE shall be in accordance with HSE publication HSG53 (Fourth edition, published 2013), (<https://www.hse.gov.uk/pubns/priced/hsg53.pdf>), RPE must be both adequate and suitable, whereby:

(a) Adequate: – Is right for the hazard and reduces exposure to the level required to protect the wearer's health; and

(b) Suitable – Is right for the wearer, task and environment, such that the wearer can work freely and without additional risks due to the RPE.

RPE shall fit properly and filters shall be of the correct type as each filter is effective for only a limited range of substances. Filters have only a limited life and shall be changed regularly to maintain performance.

When replacing parts such as filters, use only manufacturers original parts, ensure that the correct type is selected and fit in accordance with the manufacturer's instructions.

Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, the Contractor shall only use breathing apparatus, never a filtering cartridge.

RPE shall ensure a level of performance that is equal to or greater than the following standards:

Table 2.9.5: Applicable Standards for RPE

	Standard	Title of Standard
1	JIS T 8151 JIS T 8157	Particulate respirator Powered air purifying respirator
2	BS EN 149: 2001+A1: 2009 BS EN 14593-1: 2018	Respiratory protective devices. Filtering half masks to protect against particles. Respiratory protective devices. Compressed air line breathing devices with demand valve. Devices with a full-face mask.
3	ANSI Z88.2-2015	Practices for Respiratory Protection

(9) Safety Harnesses and Safety Belts

PPE for PFRS shall prevent the risk of workers falling from a height or sliding down slopes.

PPE for PFAS shall arrest a worker in a fall from a height or sliding down slopes.

For further requirements on PPE for PFRS and PFAS, refer to JSSS 2.5.13 [PPE for Fall Prevention].

PPE for PFRS and PFAS shall ensure a level of performance that is equal to or greater than the following standards:

Table 2.9.6: Applicable Standards for PPE for PFRS and PFAS

	Standard	Title of Standard
1	JIS T8165	Personal fall-arrest systems
2	ANSI Z359.0 to Z359.16	ANSI/ASSE Z359 Fall Protection and Arrest Standards Package
3	BS EN 361	Personal protective equipment against falls from a height. Full body harnesses

(10) Gloves

Gloves shall protect workers' hands from electric shocks, sparks during welding and fusing work, molten metal, heated metal, etc., and shall reduce the vibrations transmitted to workers' hands by tools, machines, etc.

Gloves shall ensure a level of performance that is equal to or greater than the following standards:

Table 2.9.7: Applicable Standards for Gloves

	Standard	Title of Standard
1	JIS T 8113 JIS T 8114	Protective Leather Gloves for Welders Vibration isolation gloves
2	ASTM D120 ANSI S2.73	Standard Specification for Rubber Insulating Gloves Mechanical vibration and shock - Hand-arm vibration
3	BS EN 60903 BS EN 12477	Live working. Gloves of insulating material Protective gloves for welders

(11) Body Protection

Contractor's Personnel shall be supplied with and shall wear suitable body protection appropriate for the working environment.

Risks such as from chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, entanglement of own clothing, hot and extremely cold work; and the like shall be considered and avoided through the provision where necessary of special protective clothing. This may include for example flame-retardant, anti-static, chain mail, chemically impermeable, and high-visibility clothing and the like.

Body Protection shall be selected and provided for the risks to be identified.

Body Protection shall be kept reasonably clean and shall be replaced when worn out or damaged.

2.9.2. First-Aid

(1) General

The Contractor shall ensure that trained personal and adequate first-aid equipment and supplies shall be readily available at the Site. First-aid kits shall be stored at selected locations on the Site where they are most likely to be needed; they must be accessible with the minimum of delay.

(2) Training

A representative number of Contractor's Personnel selected by the HSO shall be trained in first aid (including cardiopulmonary resuscitation) to a minimum standard of that recommended by the International Federation of Red Cross and Red Crescent Societies standard course or equivalent.

(3) First Aid Kits

(a) By reference to JSSS 1.4 [*Compliance with JSSS and Other Regulations*], for any items in this Section or relevant to the subject of this Section and which are not fully covered by JSSS, the Contractor shall take necessary measures for first aid complying with the technical requirements specified in OSHA, 1910 Subpart K Medical and First Aid of Part 1910 - Occupational Safety and Health Standards".

(b) First Aid kits shall comply with ANSI Z308.1 and unless otherwise specified in the Particular Safety Specification, Class A first aid kits shall be provided at the working area(s) on Site and one Class B safety kit shall be provide at the sick bay.

(c) All persons working at the site need to be aware of their purpose and location. Adequate signage shall be provided at the Site to show the location of the first aid kit(s).

(d) Each first-aid kit shall contain the specified items and quantities listed in ANSI Z308 as follows:

- (i) Adhesive Bandage;
- (i) Adhesive Tape;
- (ii) Antibiotic Application;
- (iii) Antiseptic;
- (iv) Breathing Barrier;
- (v) Burn Dressing (gel soaked);
- (vi) Burn Treatment;
- (vii) Cold Pack;
- (viii) Eye Covering, with means of attachment;
- (ix) Eye/Skin Wash;
- (x) First Aid Guide;
- (xi) Hand Sanitizer;
- (xii) Medical Exam Gloves;
- (xiii) Roller Bandage;
- (xiv) Scissors;
- (xv) Splint;
- (xvi) Sterile pad;

- (xvii) Tourniquet;
 - (xviii) Trauma pad; and
 - (xix) Triangular Bandage.
- (e) Each first-aid kit shall contain any additional items and quantities that may be necessary according to the requirements and location of the Works.
- (f) The Contractor shall ensure that the following additional items are provided with each first aid kit:
- (i) A list of emergency phone numbers;
 - (ii) Flashlight and extra batteries; and
 - (iii) Bottled drinking water.
- (g) To prevent disease transmission when giving first-aid, first-aid kits shall contain PPE such as disposable gloves, CPR breathing barriers, eye protection and like supplies.
- (h) Further to the requirements of JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*] and unless otherwise required by the manufacturer or approved by the Engineer, first aid kits shall be inspected tested and maintained at least once a month.

The HSO shall also conduct regular checks to ascertain any requirements for the following:

- (i) Inventory and reorder supplies;
- (ii) Follow up with the manufacturer on maintenance issues; and
- (iii) Schedule training and retraining.

(4) Automated External Defibrillator – AED

- (a) Unless otherwise specified in the Particular Safety Specification, and amongst any other first-aid equipment to be provided by the Contractor, the Contractor shall provide at least one AED at the Site;
- (b) The AED shall be stored at a selected location on the Site where it is most likely to be needed and it must be accessible with the minimum of delay;
- (c) All personnel at the site shall be kept informed of the purpose and location and the Contractor shall train a sufficient number of personnel in its use;
- (d) Adequate signage shall be provided at the Site to show the location of the AED together with instructions for its use;
- (e) Further to the requirements of JSSS 1.35 [*Contractor's Equipment, Temporary Works, Safety Equipment and PPE*] and unless otherwise required by the manufacturer or approved by the Engineer, AED's shall be inspected and maintained at least once per month as follows:
 - (i) Visually inspect looking for dirt, damage, or contamination;
 - (ii) Inspect electrodes ensuring that they are unexpired and in their original, sealed packages, two sets shall be provided;
 - (iii) Test primary battery;
 - (iv) Make sure a backup battery is stored with the AED and test backup battery; and
 - (v) Keep the AED charged and check it is maintaining a charge.

The HSO shall also conduct regular checks to ascertain any requirements for the following:

- (i) Inventory and reorder supplies;
- (ii) Follow up with the manufacturer on maintenance issues; and
- (iii) Schedule training and retraining.

(f) The AED shall ensure a level of performance that is equal to or greater than the following standards:

Table 2.9.7: Applicable Standards for AED

	Standard	Title of Standard
1	BS EN 60601-2-4:2011+A1:2019	Medical electrical equipment, Part 2-4: Particular requirements for the safety of cardiac defibrillators

検討経緯書

3 Existing Underground, Concealed and Overhead Services

JSSS in Japanese (Provisional Final Draft JR0 9/10)	JSSS in English R0 (Provisional Final Draft 9/9) translated by NK	Comment / Revised by M D
<p>3 地下埋設物・架空線等上空施設一般</p> <p>3.1 地下埋設物一般</p> <p>当該工事が既存の地下埋設物の保全、切り回し、撤去等を必要とする場合、又は地下埋設物へ影響を与える可能性のある場合、発注者及びエンジニアは地下埋設物の管理者からかかる工事実施に関する合意を取得するものとする。</p> <p>請負者はかかる合意の下、実際の施工にあたり同管理者と協議し、必要な許可・合意を取得しなければならない。その際、発注者及びエンジニアは協議、許可・合意の取得に必要な協力を行うものとする。</p> <p>請負者は地下埋設物の試掘、保全、切り回し、撤去等にかかる仕様、手続きに関して、本契約で別に定めるところがあれば、これに従わなければならない。</p>	<p>3. Underground Installations and Overhead Lines</p> <p>3.1 Underground Installations</p> <p>When the work concerned requires protecting, relocating and removal of existing underground installations, or there is a possibility of affecting underground installations, the Employer and the Engineer shall obtain agreement from the administrator of the installations regarding the work to be done.</p> <p>The Contractor shall, under such agreement, consult with the administrator and obtain the necessary permit and agreement prior to the start of the work.</p> <p>At that time, the Employer and the Engineer shall cooperate with the Contractor as necessary for consultation and obtaining permission / agreement.</p> <p>The Contractor shall comply with the specification and procedure related to the exploratory excavation, protecting, relocating and removal of existing underground installations specified in the Contract, if any.</p>	
<p>3.1.1 事前準備と作業計画</p> <p>(1) 地下埋設物の存在、埋設位置について契約において確認できる場合、請負者は施工に先立ち、次の事前準備を行わなければならない。</p> <p>(a) 当該の地下埋設物にかかる試掘、保全、切り回し、撤去にかかる措置、工程を記載した作業計画書を作成し、エンジニアへ提出すること。</p> <p>(b) 上記作業計画書に基づき、作業の実施に先立ち埋設物管理者と協議し、合意を取り付けること。</p> <p>(c) 試掘の実施後、試掘結果(埋設物種類、位置、深さ、規格、構造など)に基づき、必要に応じて作業計画書を見直し、エンジニアへ再提出するとともに、埋設物管理者との協議を行い、許可を得ること。</p> <p>(2) 地下埋設物の存在、埋設位置について契約において確認ができないがその存在が想定される場合、請負者は施工に先立ち、次の事前確認と準備を行わなければならない。</p> <p>(a) 想定される地下埋設物の試掘のための概略の提案書を作成し、エンジニアへ提出すること。</p> <p>(b) 上記(a)に記載の提案に関するエンジニアからの指示に基づき、想定される地下埋設物の種類、試掘箇所、試掘方法、試掘数量、試掘の留意事項を示した作業計画書を作成し、エンジニアに提出した上で試掘を実施すること。</p> <p>(c) 上記作業計画書に基づき、試掘作業の実施に先立つ埋設物管理者の許可の取り付けを行うこと。</p>	<p>3.1.1 Preparation and Work Planning</p> <p>(1) When the existence and location of underground installations can be confirmed in the Contract, the Contractor shall make the following preparation prior to his construction work.</p> <p>(a) Prepare particular Method Statement describing the measures for protecting, relocating and removal of the underground installations, and submit it to the Engineer.</p> <p>(b) Prior to the implementation of the work, consult with the administrator of the installation and obtain agreement based on the above particular Method Statement.</p> <p>(c) After conducting exploratory excavation, based on the exploratory results of type, location, depth, standards, structure, etc. of the underground installation, review and revise the particular Method Statement as necessary and resubmit it to the Engineer.</p> <p>(2) When the existence and location of underground installations cannot be confirmed in the Contract, however, such existence is predicted, the Contractor shall perform the following confirmation and preparation prior to the commencement of the construction work.</p> <p>(a) Prepare brief proposal for exploratory excavation of the assumed underground installations and submit it to the Engineer.</p> <p>(b) Based on the instructions from the Engineer regarding the proposal described in (a) above, create particular Method Statement showing the type and location of assumed underground installation, method, quantity and specifications of exploratory excavation, then implement the exploratory excavation after obtaining the approval of the Engineer.</p> <p>(c) Consult with the administrator of the underground installations with the Method Statement prior to the exploratory excavation and obtain agreement to the work.</p> <p>(d) After conducting the exploratory excavation, review the Method Statement based on the exploratory excavation results regarding type of underground installation, location, depth,</p>	

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<p>(d) 試掘の実施後、試掘結果(埋設物の種類、位置、深さ、規格、構造など)に基づき作業計画書を必要に応じて見直し、エンジニアへ再提出するとともに、埋設物管理者との協議を行うこと。</p> <p>(3) 請負者は、機械による試掘で地下埋設物へ被害をもたらさないことが確実である場合以外は、人力により試掘を行わなければならないことを前提に、作業の計画を立てなければならない。</p>	<p>standard, structure, etc., resubmit it to the Engineer, and discuss with the administrator of the underground installation.</p> <p>(3) The Contractor shall make the Method Statement based on the execution of exploratory excavation by hand other than the case that it can be conformed the excavation with machines will not damage the installations.</p>	
<p>3.1.2 現場管理</p> <p>請負者は、埋設物が存在する場所で施工するときは、次の措置を講じなければならない。また本仕様書 2.2 [工事現場周辺の危害防止]に基づき、道路交通及び歩行者の安全を確保する措置を講じなければならない。</p> <p>(1) 作業計画書に従い作業を行い、埋設物の破損による感電事故、水道・下水・ガスの噴出等の事故を防止すること。また、そのために必要な埋設物の移設、補強、防護を作業計画書に従い実施すること。</p> <p>(e) 掘削断面内に移設できない埋設物がある場合は、試掘段階から本体工事の埋戻し・路面復旧の段階までの間、埋設物を防護・維持管理し、管理者から点検の指示がある場合にはそれに従うこと。</p> <p>(f) 埋設物に近接して掘削を行う場合には、周囲の地盤のゆるみ、沈下等に十分注意するとともに、埋設物の補強、移設等の埋設物の保安を行うこと。</p> <p>(g) 埋設物の周辺の掘削、埋設物の移設、補強、防護の作業については、埋設物の管理者の指示又は立会いの下で行うこと。</p> <p>(h) 可燃性物質の輸送管(ガス導管)等の埋設物の付近において、溶接機、切断機等火気を伴う機械器具を使用しないこと。</p> <p>(i) 埋設充電電路の周辺で掘削作業を行う場合で感電のおそれがあるときは、保護具の着用、絶縁工具の使用等の必要な措置を講じること。</p> <p>(j) 埋設物の周辺で掘削の作業を行う場合において、掘削機械及び積込機械の使用による埋設物の損壊により作業者に危険を及ぼすおそれのあるときは、これらの機械を使用してはならない。</p>	<p>3.1.2 Site Management</p> <p>The Contractor shall take the following measures when the work shall be executed at a place where underground installations exist.</p> <p>In addition, the Contractor shall take measures to ensure the safety of road traffic and pedestrians complying with JSSS 2.2 [Preventing Hazards Around Construction Sites].</p> <p>(1) Implement works in accordance with the particular Method Statement to prevent accident such as electric shock, blowout of water, sewage or gas with the damage of underground installations by providing necessary protection, reinforcement and relocation of the underground installations.</p> <p>(2) When there are underground installations that cannot be relocated within the excavation section, protect and maintain the installations from the exploratory excavation stage to the backfilling and road surface restoration stage of the permanent work, and follow the instructions regarding checking by the administrator of the underground installations.</p> <p>(3) When excavating close to underground installations, pay special attention not to loosen and make subsidence of the surrounding ground, and secure the installations by reinforcing and relocating.</p> <p>(4) Perform excavation near the underground installations, and its relocation and protection work under the direction or presence of the administrator of the installations.</p> <p>(5) Prohibit to use equipment with fire such as welding machines and gas cutting machines, in the vicinity of underground installations of pipelines (gas conduits) for combustible substances.</p> <p>(6) When there is risk of electric shock in excavating work near the charged circuit, make sure that the Contractor's personnel wear PPE to prevent electric shock and use insulated equipment as necessary.</p> <p>(7) Not excavate with machines of excavator and loader in the ground surrounding installations when there is risk to the workers by the damage to the underground installations by the machines.</p>	

JICA standard Safety Specification Preparation Study
3. Underground Installations and Overhead Lines 3.2 Overhead Lines (English R0)

2019.9.10 JICA PFD-J
2019.9.13 NK R0

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<p>3 地下埋設物・架空線等上空施設一般</p> <p>3.2 架空線等上空施設一般</p> <p>当該工事が送電・配電用の架空電線、電話線、通信線等の上空施設(以下当節では、「架空線」という。)の近くで施工を必要とする場合、発注者及びエンジニアは架空線の管理者からかかる工事実施に関する合意を取得するものとする。請負者はかかる合意の下、実際の施工にあたり同管理者と協議し、必要な許可を取得しなければならない。その際、発注者及びエンジニアは許可の取得に必要な協力を提供するものとする。</p> <p>請負者は、架空線の防護工の仕様、安全措置、管理者からの許可取得手続き等に関して、本契約で別に定めるところがあればこれに従わなければならない。</p>	<p>3 Underground Installations and Overhead Lines</p> <p>3.2 Overhead Lines</p> <p>If the construction requires to work near overhead lines for power transmission and distribution, telephone lines, communication lines, etc. (hereinafter referred to as “overhead lines” in this section), the Employer and the Engineer shall obtain an agreement regarding the implementation of such construction from the administrator of the overhead line concerned.</p> <p>Under such agreement, the Contractor shall consult with the administrator to obtain the necessary permits and agreements for actual construction.</p> <p>The Employer and the Engineer shall provide the Contractor with the necessary cooperation to obtain the permission / agreement.</p> <p>The Contractor shall comply with the provisions stipulated separately in the Contract if any, regarding to the specifications of protection, safety measures and procedures for obtaining permission from the administrator of the overhead line.</p>	
<p>3.2.1 事前準備と作業計画</p> <p>(1) 架空線の近くで施工するときは、請負者は次の準備を行わなければならない。</p> <p>(a) 安全に必要な措置、防護方法、架空線の管理者による立会の必要性の有無、緊急時の通報先及び方法等を記載した作業計画書を作成しエンジニアへ提出すること。</p> <p>(b) 上記作業計画書に基づく作業の実施に先立って、架空線管理者と協議し、許可を取り付けること。</p> <p>(2) 請負者は、架空線の近くで工事を行う場合は、必要に応じて架空線の管理者の立会を依頼しなければならない。</p>	<p>3.2.1 Preparation and Work Planning</p> <p>(1) When performing construction work near an overhead line, the Contractor shall make the following preparations prior to commencement.</p> <p>(a) Prepare and submit to the Engineer a particular method statement describing necessary safety measures, protection methods, necessity of attendance by the overhead line administrator, emergency call list and communication system, etc.</p> <p>(b) Prior to the implementation of the work based on the above particular method statement, consult with the overhead line administrator and obtain a permission.</p> <p>(2) When performing construction work near an overhead line, the Contractor shall request the attendance of an overhead line administrator as necessary.</p>	
<p>3.2.2 充電した架空線の近くでの工事の現場管理</p> <p>請負者は、充電した架空線の近くで行う工事では、次のうち必要な措置を講じなければならない。</p> <p>(1) 当該国の法律又は架空線の管理者の規則に従い、作業の実施前に架空線の管理者と作業日程、作業方法、防護措置、架空電線の管理者の立会い等について十分打ち合わせること。</p> <p>(2) くい打機、くい抜き、移動式クレーン、ダンプトラック等の建設機械を使用する作業において、作業中に当該充電電路に建設機械が接触し、又は接近することにより感電の危険が生ずるおそれのあるときは、請負者は必要に応じて次の措置を講じなければならない。</p> <p>(a) 充電電路への絶縁用防護管の装着</p>	<p>3.2.1 Site Management for Construction near Overhead Charged Circuit</p> <p>The Contractor shall take necessary measures among the following requirement in the construction work near the overhead charged circuit.</p> <p>(1) Discuss with the administrator of the overhead line sufficiently about the work schedule, work method, protective measures, attendance of the overhead line administrator before implementing the work in accordance with the Laws of the Country or the rules of the overhead line administrator.</p> <p>(2) For works using construction equipment such as pile drivers/extractors, mobile cranes, dump trucks, when there is a risk of electric shock if the equipment come into contact with or approach the charged circuit during the work, the Contractor shall take the following measures as necessary.</p>	

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<p>(b) 充電電路の位置を明示する看板等の設置</p> <p>(c) 建設機械の旋回・立入区域等の設定</p> <p>(a) 本仕様書 2.4 [監視員、誘導員の配置]に従い、監視員を配置すること。</p> <p>(3) 建設機械、ワイヤロープ等が目測上の誤差等により、隔離距離内に入ること防止するために、建設機械の行動範囲を規制するための柵等の設置、建設機械のジブ等の行動範囲を制限するために目立つ小旗を取り付けた防護ゲート等を設けること。</p> <p>(4) 請負者の要員の身体、建設機械の先端やワイヤロープ、工具、材料等は、充電電路に対して安全な隔離距離を保つこと。隔離距離は、次表に示す値、当該国の法律で規定する値、又は送配電線類の管理者の規定する値のうち最大の値とすること。</p> <table border="1"> <thead> <tr> <th>電路の電圧</th> <th>隔離距離</th> </tr> </thead> <tbody> <tr> <td>特別高圧 (7000V 以上)</td> <td>2mただし、60,000 以上は10,000V、又はその端数を増すごとに 20cm 増し</td> </tr> <tr> <td>高圧 (600V 以上 7000V 以下)</td> <td>1.2m</td> </tr> <tr> <td>低圧 (600V 以下)</td> <td>1m</td> </tr> </tbody> </table> <p>(5) 請負者は、架空線の充電電路の近くでの作業の開始前には、当該作業の作業員及び監視員に次を周知徹底すること。</p> <p>(a) 充電電路の位置</p> <p>(b) 充電電路の感電の危険性</p> <p>(c) 充電電路からの隔離距離</p> <p>(d) 作業手順</p> <p>(b) 当該作業現場における感電予防措置</p> <p>(c) 使用すべき保護具</p> <p>(d) 本仕様書 3.2.2 (6)に基づく感電事故発生時の対応</p> <p>(e) 本仕様書 1.11[救急救護計画]に基づく感電事故発生時の救援救護方法</p> <p>(6) 感電事故発生時には次の対応を行うこと。</p> <p>(a) 充電電路の管理者に直ちに報告すること。</p> <p>(b) 充電電路により感電した建設機械の車体や吊り荷には作業員を絶対に触らせないようにし、また、当該建設機械から作業員を遠ざけること。</p> <p>(c) 充電電路により感電した建設機械の運転手が感電していない場合、運転手に直ちに建設機械を充電電路から遠ざけさせること。遠ざけさせることができない場合は、充電電路が通電停止になるまで運転手を機体内に待機させること。</p>	電路の電圧	隔離距離	特別高圧 (7000V 以上)	2mただし、60,000 以上は10,000V、又はその端数を増すごとに 20cm 増し	高圧 (600V 以上 7000V 以下)	1.2m	低圧 (600V 以下)	1m	<p>(a) Attaching the insulating protective pipe to the overhead distribution line</p> <p>(b) Installation of signs and sign boards that clearly indicate the position of overhead lines</p> <p>(c) Establishing turning range of construction equipment and entry prohibited area</p> <p>(d) Placement of spotters prescribed in 2.4 [Placement of Spotters and Flagmen] in JSSS</p> <p>(3) In order to prevent construction equipment or wire ropes from entering the separation distance due to eye measurement errors, install fences to restrict the moving range of construction equipment and/or a protective gate with small flags that stand out to limit the moving range of crane job.</p> <p>(4) Maintain a safe separation distance from the charged circuit to the Contractor's Personnel's bodies, tip of construction equipment, wire rope, tools, and materials. The separation distance shall be the maximum value among the values shown in the following table, the values prescribed by the Laws of the Country, or the values prescribed by the administrator of the overhead transmission and distribution lines.</p> <table border="1"> <thead> <tr> <th>Circuit Voltage</th> <th>Separation Distance</th> </tr> </thead> <tbody> <tr> <td>Extra-high Voltage (7000V and above)</td> <td>2m (20cm to be added for every 10,000V increase and fraction from 60,000V)</td> </tr> <tr> <td>High Voltage (600V up to 7000V)</td> <td>1.2m</td> </tr> <tr> <td>Low Voltage (Less than 600V)</td> <td>1m</td> </tr> </tbody> </table> <p>(5) Prior to the start of work in the vicinity of the overhead charged line, the Contractor shall thoroughly inform the workers and spotters of the work of the followings.</p> <p>(a) Location of overhead charged circuit</p> <p>(b) Risk of electric shock on the overhead charged circuit</p> <p>(c) Separation distance from overhead charged circuit</p> <p>(d) Work procedure</p> <p>(e) Preventive measures against electric shock for the work</p> <p>(f) Protective equipment to be used</p> <p>(g) Response to an electric shock accident based on 3.2.2 (6)</p> <p>(h) Rescue method in the event of an electric shock based on 1.11 [Emergency Relief Plan]</p> <p>(6) The following measures shall be taken in the event of an electric shock accident.</p> <p>(a) Report immediately to the administrator of the overhead charged line.</p> <p>(b) Prohibit workers to touch the body of the construction equipment or suspended load that has been electrified by the charging circuit, and keep workers away from the construction equipment.</p>	Circuit Voltage	Separation Distance	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)	High Voltage (600V up to 7000V)	1.2m	Low Voltage (Less than 600V)	1m	
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<p>(d) 二次感電被害防止のため、絶縁用保護具・救出方法についての教育を受けたもの以外には、感電状況にある者の救出をさせてはならない。</p> <p>(e) 法感電による心肺停止の被災者には、直ちに心肺蘇生や自動体外式除細動器(AED)の使用等の一次救命処置を施すこと。</p>	<p>(c) If the operator of the construction equipment in contact with or in close proximity to the overhead line does not get an electric shock, the operator shall immediately move the equipment away from the overhead line. If it is not possible to move the equipment away, have the operator wait in the cabin until the overhead line is de-energized.</p> <p>(d) To prevent secondary electric shock accident, only those who have received education on protective equipment for insulation and rescue methods shall be allowed to rescue the victims who are in an electric shock situation.</p> <p>(e) Immediately perform primary lifesaving measures such as cardiopulmonary resuscitation or use of Automatic External Defibrillator (AED) for victims of cardiopulmonary arrest due to an electric shock.</p>	

JICA Standard Safety Specification Preparation Study
3 UNDERGROUND AND CONCEALED SERVICES (English R2 for Issue 3)

2019.9.10 Japanese Final
2020.1.31 NK Draft Eng. R1
2019.12.4 NK Issue 2
2020.2.25 NK Draft Eng. R2

JSSS in Japanese (2019/9/10)	JSSS in English Issue 2 (2019/12/4)	JICA Comments (2019/12/19) JC: JICA Comments in blue letters on sentence underlined NK: NK actions	JSSS in English R2 for Issue 3 (2020/2/25) Sentences marked yellow color are added or modified ones from the last version.
	<p><i>NKMD: there is still a risk of hitting existing services which are concealed in walls particularly <u>in renovation projects</u>. This is not covered by the draft of JSSS at present and therefore I have changed the description of this section to include concealed services also. The same principles apply and this is a significant cause of accident.</i></p>	<p>JC: Renovation project is seldom done by ODA. Minutes of meeting of 2020/1/17 to 27: (MM1/17)</p> <ol style="list-style-type: none"> 3.1 Existing Underground and Concealed Services → NK explained there are renovation projects in ODA such as airport, sewage projects where pipes, cables, etc. are owned by the Employer. Also, the draft of JSSS in Japanese does not cover the safety requirements for the existing concealed Services. This will be left as it is for now. 3.1.1 (3) to (6) “Bidding Document” → These (3) to (6) will be described in User Guide. 3.1.3 (14) to (15) “marker tiles”, “as built drawings” (JICA commented to delete.) → NK explained these requirements are for future safety and recommend that they are left as they are. Chapter 3 → NK will modify Chapter 3 taking into consideration the JICA comments and requested JICA to review next draft of Chapter 3. JICA agreed. 	
<p>3 地下埋設物・架空線等上空施設一般</p> <p>3.1 地下埋設物一般</p> <p>当該工事が既存の地下埋設物の保全、切り回し、撤去等を必要とする場合、又は地下埋設物へ影響を与える可能性のある場合、発注者及びエンジニアは地下埋設物の管理者からかかる工事実施に関する合意を取得するものとする。</p> <p>請負者はかかる合意の下、実際の施工にあたり同管理者と協議し、必要な許可・合意を取得しなければならない。その際、発注者及びエンジニアは協議、許可・合意の取得に必要な協力を行うものとする。</p> <p>請負者は地下埋設物の試掘、保全、切り回し、撤去等にかかる仕様、手続きに関して、本契約で別に定めるところがあれば、これに従わなければならない。→E3.1.1 (5)ほか規定済み(但し、英文では埋設物の所有者別に対応を分けているので内容、表現は違う部分が多い。)</p> <p>3.1.1 事前準備と作業計画</p> <p>(1) 地下埋設物の存在、埋設位置について契約において確認できる場合、請負者は施工に先立ち、次の事前準備を行わなければならない。→E3.1.2 (1)</p>	<p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. Generally</p> <ol style="list-style-type: none"> This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground <u>or Concealed Services</u>”), and which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing. If the Contractor is required to perform any work in connection with the Underground or Concealed Services, full details of such work shall be given by the Employer in the Bidding Documents (Technical Specification and Drawings). If any Underground or Concealed Services are the property of the Employer, this shall be stated clearly and the route, size, purpose of each shall be described and shown. If services are to remain live and functional throughout the Time for Completion of the Works or if 	<p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>JC: Deleted. MM1/17: 3 This will be left as it is for now. NK: The concealed services will be left as it is as they are expected in the ODA projects.</p> <p>3.1.1. General</p> <ol style="list-style-type: none"> This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground Services”), and which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing. If applicable, the Contractor is required to perform the work in connection with the Underground or Concealed Services, in accordance with the full details of such work specified in the Contract (Technical Specification and Drawings). <p>JC: (2) is modified because it is guidance the Employer. NK: JICA’s draft is modified as (2) in right.</p>	<p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1.General</p> <ol style="list-style-type: none"> This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), and which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing. The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter. In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third party (called as “the owner of Underground or Concealed Services”), the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.

<p>に規定済み(英文は埋設物の存在が分かっていることを前提としている。)</p> <p>(a) 当該の地下埋設物にかかる試掘、保全、切り回し、撤去にかかる措置、工程を記載した作業計画書を作成し、エンジニアへ提出すること。→E3.1.2 (1)(a)に規定済み(英文ではエンジニアへの提出は規定していない。)</p> <p>(b) 上記作業計画書に基づき、作業の実施に先立ち埋設物管理者と協議し、合意を取り付けること。→E3.1.2 (1)(b)に規定済み</p> <p>(c) 試掘の実施後、試掘結果(埋設物種類、位置、深さ、規格、構造など)に基づき、必要に応じて作業計画書を見直し、エンジニアへ再提出するとともに、埋設物管理者との協議を行い、許可を得ること。→E3.1.2 (1)(e)に規定済み(英文では赤字部分は規定していない。)</p> <p>(d) 地下埋設物の存在、埋設位置について契約において確認ができないがその存在が想定される場合、請負者は施工に先立ち、次の事前確認と準備を行わなければならない。→規定なし(埋設物の存在が確認できない場合については規定していない。)(2)(a)~(d)→英文に追加すべきと考える。)</p> <p>(e) 想定される地下埋設物の試掘のための概略の提案書を作成し、エンジニアへ提出すること。→規定なし</p> <p>(f) 上記(a)に記述の提案に関するエンジニアからの指示に基づき、想定される地下埋設物の種類、試掘箇所、試掘方法、試掘数量、試掘の留意事項を示した作業計画書を作成し、エンジニアに提出した上で試掘を実施すること。→E3.1.2 (1)(e)に規定済み</p> <p>(g) 上記作業計画書に基づき、試掘作業の実施に先立つ埋設物管理者の許可の取り付けを行うこと。→規定なし</p> <p>(h) 試掘の実施後、試掘結果(埋設物の種類、位置、深さ、規格、構造など)に基づき作業計画書を必要に応じて見直し、エンジニアへ再提出するとともに、埋設物管理者との協議を行うこと。→規定なし</p> <p>(2) 請負者は、機械による試掘で地下埋設物へ被害をもたらさないことが確実である場合以外は、人力により試掘を行わなければならないことを前提に、作業の計画を立てなければならない。→人力掘削については E3.1.2 (1)(e)で触れている。</p>	<p>they are to be removed and if so by whom shall also be described.</p> <p>(4) If any of these Underground or Concealed Services are the property of a legally constituted public authority or a third party, this shall be stated clearly and the owner, route, size, purpose of each shall be described and shown. If it is to remain live and functional throughout the Time for Completion of the Works or if it is to be removed and if so by whom, (i.e. the authority or third party or the Contractor) shall also be described. The Bidding Documents shall also describe or include the procedures and requirements (including responsibility for insurance and safety procedures) of the authority or third party if the Contractor is to carry out the work.</p> <p>(5) In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third party, the Employer shall consult with such authority or third party before Bids are requested and obtain their legally binding agreement of the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures) of the authority or third party.</p> <p>After award the Contractor (accompanied by a representative of the Employer and Engineer) may consult with the authority or third party and execute the works according to the requirements of the Contract and the instructions of the Engineer.</p> <p>(6) Alternatively, the Contractor shall cooperate with the authority or third party and/or their contractors if such authority or third party are to perform the works themselves in accordance with the requirements of GC 4.6 [Co-operation]. If this alternative is to apply, the Employer shall clearly state this in the Bidding Documents and provide all relevant detail e.g. who will be performing the work, when and how and what (if anything) the Contractor is to provide.</p>	<p>(3) Deleted.</p> <p>(4) Deleted.</p> <p>(5) Deleted.</p> <p>JC: (3) to (5) are deleted. These are guidance notes.</p> <p>MM1/17: 3.1.1 (3) to (6) "Bidding Document" → These (3) to (6) will be described in User Guide.</p> <p>NK (3) to (5) are deleted and moved to the User Guide.</p> <p>JC: (5) is replaced with the following (6).</p> <p>NK: Replaced with JICA (6) and modified as (3) and (4) in right..</p> <p>(6) The Employer shall obtain legally binding agreement of the owner of the Underground or Concealed Services on the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures).</p> <p>The Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of the Underground or Concealed Services to obtain a permission of the owner to execute the works according to the requirements of the Contract and the instructions of the Engineer.</p> <p>NK: To make balance for (3) and (4), Employer's Services is added in (5).</p>	<p>(4) In accordance with the legally binding agreement between the Employer and the owner of Underground or Concealed Services obtained by the Employer regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission of the owner of Underground or Concealed Services to execute the work according to the requirements of the Contract and the instruction of the Engineer.</p> <p>(5) In the case of Underground or Concealed Services which are the property of the Employer, the Contractor shall take the necessary procedure for the work in accordance with the Contract.</p>
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3.1.2 現場管理

請負者は、埋設物が存在する場所で施工するときは、次の措置を講じなければならない。また本仕様書 2.2 [工事現場周辺の危害防止]に基づき、道路交通及び歩行者の安全を確保する措置を講じなければならない。→E3.1.2 (5)に規定済み(工事中の交通安全確保に関して。)

- (1) 作業計画書に従い作業を行い、埋設物の破損による感電事故、水道・下水・ガスの噴出等の事故を防止すること。また、そのために必要な埋設物の移設、補強、防護を作業計画書に従い実施すること。→E3.1.3 (1)に規定済み(事故防止に関しては、3.1.3の複数項目に異なる角度からの留意点を挙げている。)
- (2) 掘削断面内に移設できない埋設物がある場合は、試験段階から本体工事の埋戻し・路面復旧の段階までの間、埋設物を防護・維持管理し、管理者から点検の指示がある場合にはそれに従うこと。→E3.1.3 (1)
- (3) 埋設物に近接して掘削を行う場合には、周囲の地盤のゆるみ、沈下等に十分注意するとともに、埋設物の補強、移設等の埋設物の保安を行うこと。→E3.1.3 (4)に規定済み
- (4) 埋設物の周辺の掘削、埋設物の移設、補強、防護の作業については、埋設物の管理者の指示又は立会いの下で行うこと。→E3.1.2 (1)(e)に規定済み
- (5) 可燃性物質の輸送管(ガス導管)等の埋設物の付近において、溶接機、切断機等火気を伴う機械器具を使用しないこと。→E3.1.3 (9)に規定済み
- (6) 埋設充電電路の周辺で掘削作業を行う場合で感電のおそれがあるときは、保護具の着用、絶縁工具の使用等の必要な措置を講じること。→E3.1.3 (10)及び 3.1.4 (1)-(6)(作業員への指示事項として)に規定済み
- (7) 埋設物の周辺で掘削の作業を行う場合において、掘削機械及び積込機械の使用による埋設物の損壊により作業者に危険を及ぼすおそれのあるときは、これらの機械を使用してはならない。→E3.1.3 (11)に規定済み

3.1.2. Preparation and Work Planning

- (1) Where Underground or Concealed Services are the property of a legally constituted public authority or a third party and the Contractor is required under the Contract to perform work thereon or to locate and protect same, the Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like, all as specified in the Bidding Documents:
 - (a) Prepare a detailed Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner's representative of the public authority or third party, emergency call list and communication system;
 - (b) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner's representative of the public authority or third party, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, of the required works, requirements and procedures of the owner;
 - (c) Obtain particular information from the owner's representative on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and
 - (d) Provide and use cable avoidance tools (CATs) and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.
 - (e) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed Services and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner's representative of the public authority or third party and the

3.1.2. Preparation and Work Planning

JC: 試掘の概念がない? There seems that "trial excavation" is not considered in this section?

NK: It is mentioned in 3.1.2 (1) (e). There is a sentence of "Conduct careful exploratory hand excavation ~"

JC: ユーティリティの所有者に着目するのではなく、日本語のように埋設が明らかかな場合とそうではない場合に分けたい。

It is not proper to pay attention to the owner of the service. It is better and desirable to mention in two cases that when the existence of the service is obvious and when it is not obvious as mentioned in Japanese version.

NK: As shown in 3.1.2 (2) (a) ~ (d) of this section in yellow are added as provide in Japanese draft.

Item (2) is added for response to the JICA comments to specify two cases.

NK: Submittal of Method Statement is not specified here because it is specified to submit when requested by the Engineer in Chapter 1 (which will be transferred from PC to JSSS).

- (1) Where Underground or ~~Concealed~~ Services are the property of a legally constituted public authority or a third party and the Contractor is required under the Contract to perform work thereon or to locate and protect same, the Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like, all as specified in the Bidding Documents:
 - (a) Prepare a detailed Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner's representative of the public authority or third party, emergency call list and communication system;
 - (b) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner's representative of the public authority or third party, give notice of work commencement, obtain further details of the location, content and condition of the Underground or ~~Concealed~~ Services, of the required works, requirements and procedures of the owner;
 - (c) Obtain particular information from the owner's representative on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and

3.1.2. Preparation and Work Planning

The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:

- (1) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system;
- (2) In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third:
 - (a) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner of Underground or Concealed Services, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, ~~of for~~ the required works, requirements and procedures of the owner of Underground or Concealed Services;
 - (b) Obtain particular information from the owner of Underground or Concealed Services on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and
 - (c) Provide and use cable avoidance tools such as Cable Locator, and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.
 - (d) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner of Underground or Concealed Services and the Engineer.
 - (e) The Method Statement shall be revised based on the information obtained from the owner of Underground or Concealed Services and the exploratory hand

	<p>Engineer.</p> <p>(2) Where Underground or Concealed Services are the property of the Employer, the Contractor shall make relevant preparations as in JSSS 3.1.2 above and perform the work in connection with the Underground or Concealed Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>(3) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the particular work.</p> <p>(4) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [<i>Risk Control Around the Site</i>].</p>	<p>(d) Provide and <u>use cable avoidance tools such as Cable Locator (CATs)</u> and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>JC: 鉄管ケーブル探知器 メタルと電気ケーブルは見つけられるが、塩ビ水道管は？ The Cable Locator can find metals and electrical cables. PVC waterpipes?</p> <p>そもそも途上国で電気線は埋まってないので標準にはならないかと→最近では埋まっている場合もある。 The electrical cables are not buried in general in developing countries. Thus, using Cable Locator cannot be a standard? → Recently, it becoming common to bury cables in those countries.</p> <p>NK: "when applicable" is added in (c.)</p> <p>(e) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed Services and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner's representative of the public authority or third party and the Engineer.</p> <p>(2) Where Underground or Concealed Services are the property of the Employer, the Contractor shall make relevant preparations as in JSSS 3.1.2 above and perform the work in connection with the Underground or Concealed Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>(3) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the particular work.</p> <p>(4) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [<i>Risk Control Around the Site</i>].</p>	<p>excavation.</p> <p>(3) In the case of Underground or Concealed Services which existence are predicted at the Site by the Contractor, but not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services and submit it to the Engineer.</p> <p>(b) Following the instruction by the Engineer regarding the proposal, create Method Statement showing the type, the owner of Underground or Concealed Services and location of assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation.</p> <p>(c) (Accompanied by a representative of the Employer and Engineer) consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(d) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p>(4) Where Underground or Concealed Services are the property of the Employer, the Contractor shall make relevant preparations as in JSSS 3.1.2 (2) and (3) and perform the work in connection with the Underground or Concealed Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>(5) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the work.</p> <p>(6) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [<i>Risk Control Around the Site</i>].</p>
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	<p>3.1.3. Requirements and Precautions</p> <p>Unless otherwise specified in the Bidding Documents, or instructed by the Engineer, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Protect and secure all Underground or Concealed Services throughout the Time for Completion of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces. (2) Take care when using power tools to break through paved surfaces above Underground or Concealed Services. (3) Take care to expose, support and protect any drains, other services (new or existing) which follow or cross the route of Underground or Concealed Services. <ol style="list-style-type: none"> (4) Support sides of all excavations, paying special attention not to loosen, weaken or cause subsidence of the surrounding ground. (5) Keep excavations free from water and snow and protect exposed Underground or Concealed Services against excessive heat or cold. (6) Adequately backfill in layers and compact to specified density to avoid all settlement. (7) Restore surface paving with material and methods specified, flush with surrounding surface and replace all surface markings and signage. 	<p>3.1.3. Requirements and Precautions</p> <p>JC: 安全以外のものが入りすぎている。どこまで入れるかは要検討。 This section contains too many items other than safety. It should be discussed how much to be mentioned in this section.</p> <p>NK: Items (4) (5) (6) (8) (14) (15) (16) are deleted.</p> <p>Unless otherwise specified in the Contract, or instructed by the Engineer, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces. (2) <u>Take care not to damage</u> the Underground Services when using power tools to break through paved surfaces above Underground or Concealed Services. <p>JC: 何に注意するのかわからない。 It is not clear what to “take care” from this sentence.</p> <p>NK: When using equipment such as an asphalt cutting machine, it is likely to damage the Underground Services. For example, “such as asphalt cutting machine” is added to clarify.</p> <ol style="list-style-type: none"> (3) Take care to expose, support <u>and protect any drains</u>, other services (new or existing) which follow or cross the route of Underground or Concealed Services. <p>JC: どういう意味でしょうか What does this mean?</p> <p>NK: The drains are drainage pipes. These drains shall be included in Underground or Concealed Services. Therefore (3) will be deleted.</p> <ol style="list-style-type: none"> (4) Support sides of all excavations, paying special attention not to loosen, weaken or cause subsidence of the surrounding ground. (5) Keep excavations free from water and snow and protect exposed Underground or Concealed Services against excessive heat or cold. (6) Adequately backfill in layers and compact to specified density to avoid any all settlement. (7) Restore surface paving with material and methods specified, <u>flush with surrounding surface</u> and replace all surface markings and signage. <p>JC: (7) What does this mean?</p> <p>NK: It means not leaving difference in level with surrounding pavement.</p> <p>JC: (8) It is better not to extend the scope of the JSSS to the operation stage.</p> <p>NK: (8) is specified test to be made at the end of the work related</p>	<p>3.1.3. Requirements and Precautions</p> <p>Unless otherwise specified in the Contract, or instructed by the Engineer, the Contractor shall:</p> <ol style="list-style-type: none"> (1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces. (2) Take care not to damage the Underground Services or Concealed Services when using power tools <u>for example asphalt cutting machine</u> to break through paved surfaces above Underground. <ol style="list-style-type: none"> (3) Restore surface paving with material and methods specified, <u>paying attention not leaving difference in level with surrounding pavement</u> and replace all surface markings and signage.
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- (8) Adequately test all Underground or Concealed Services after completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.
- (9) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.
- (10) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.
- (11) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.
- (12) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.
- (13) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [*Spotters, Flagmen and the Like*] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.
- (14) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.
- (15) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.
- (16) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.

with the Underground or Concealed Services. Therefore, it will be revised by adding "at the time of completion".

- (8) Adequately test all Underground or Concealed Services after completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.
- (9) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.
- (10) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.
- (11) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.
- (12) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.
- (13) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [*Spotters, Flagmen and the Like*] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.

JC: Ditto (better not to extend the scope of the JSSS to the operation stage.)

MM1/17: 3.1.3 (14) to (15) "marker tiles", "as built drawings" (JICA commented to delete.) → NK explained these requirements are for future safety and recommend that they are left as they are.

NK: Items (14) to (16) are left as they are as minuted.

- (14) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.
- (15) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.
- (16) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the

- (4) Adequately test all Underground or Concealed Services **at the time of** completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.
- (5) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.
- (6) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.
- (7) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.
- (8) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.
- (9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [*Spotters, Flagmen and the Like*] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.
- (10) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.
- (11) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.
- (12) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.

3.1.4. Information to Contractor's Personnel

	<p>3.1.4. Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <ol style="list-style-type: none"> (1) Location of live cables and equipment. (2) Risk of electric shock from live cables or equipment. (3) Separation distances from live cables and equipment. (4) Work procedure, (5) Preventive measures against electric shock, (6) PPE to be used. (7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5 and JSSS 3.1.6. (8) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan]. (9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services. <p>3.1.5 Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.20 [Accident Response Plan].</p> <p><i>NK these requirements are good and I have edited them accordingly. Because in principle they apply to all electrical works, I have moved them to Chapter 1, 1.20 as general prevailing requirements. I have also added equipment in JSSS 2.9 PPE.</i></p>	<p>Engineer and to the authority and/or third party as appropriate.</p> <p>3.1.4. Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <ol style="list-style-type: none"> (1) Location of live cables and equipment. (2) Risk of electric shock from live cables or equipment. (3) Separation distances from live cables and equipment. (4) Work procedure, (5) Preventive measures against electric shock, (6) PPE to be used. (7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5 and JSSS 3.1.6. (8) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan]. (9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services. <p>3.1.5. Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [Accident Response Plan].</p> <p>NK: JSSS 1.21 [Accident Response Plan] Issue 7 specified about the electric shock accident as follows:</p> <p>Where the scope of work includes any work to electrical equipment, cables, wiring, services and systems the Contractor shall train a team of his workers to act as a rescue team in the event of any electrical accident. All rescue team members in addition to normal first aid treatment, shall be trained to perform CPR and also to operate an AED. The following measures shall be taken in the event of an electric shock accident.</p> <ol style="list-style-type: none"> (1) Prohibit workers from touching the chassis or body of any Contractor's Equipment or materials that have been electrified by any live circuit and keep all Contractor's Personnel well away from such equipment, materials and the working area. (2) When the operator of the Contractor's Equipment which is in contact with or in close proximity to the live circuit does not get an electrical shock, the operator shall immediately move the equipment away. (3) When it is not possible to move the Contractor's Equipment away, the operator shall remain in the cabin until the affected live circuits are de-energised. (4) Prevent secondary electric shock accident by permitting 	<p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <ol style="list-style-type: none"> (1) Location of live cables and equipment. (2) Risk of electric shock from live cables or equipment. (3) Separation distances from live cables and equipment. (4) Work procedure, (5) Preventive measures against electric shock, (6) PPE to be used. (7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5. (8) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan]. (9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services. <p>3.1.5. Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [Accident Response Plan].</p>
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		<p>only those who have received training electrical rescue to rescue the casualties of an electric shock accident.</p> <p>(5) Immediately perform primary lifesaving measures such as CPR, if necessary use an AED and call for emergency medical support.</p> <p>(6) Report immediately to the Engineer and where necessary to the owner's representative of the Underground, Concealed or Overhead Services.</p>	
<p>3.2 架空線等上空施設一般</p> <p>当該工事が送電・配電用の架空電線、電話線、通信線等の上空施設(以下当節では、「架空線」という。)の近くで施工を必要とする場合、発注者及びエンジニアは架空線の管理者からかかる工事実施に関する合意を取得するものとする。請負者はかかる合意の下、実際の施工にあたり同管理者と協議し、必要な許可を取得しなければならない。その際、発注者及びエンジニアは許可の取得に必要な協力を提供するものとする。→E3.2.1(5)に規定済み(発注者が事前に協議を行い、合意書を取得することのみ。)</p> <p>請負者は、架空線の防護工の仕様、安全措置、管理者からの許可取得手続き等に関して、本契約で定めるところがあればこれに従わなければならない。→規定なし</p> <p>3.2.1 事前準備と作業計画</p> <p>(1) 架空線の近くで施工するときは、請負者は次の準備を行わなければならない。</p> <p>(a) 安全上必要な措置、防護方法、架空線の管理者による立会の必要性の有無、緊急時の通報先及び方法を記載した作業計画書を作成しエンジニアへ提出すること。→E3.2.2(1)(a)に規定済み、ただし提出は規定無し。</p> <p>(b) 上記作業計画書に基づく作業の実施に先立って、架空線管理者と協議し、許可を取り付けること。→E3.2.2(1)(b)に規定済み(発注者が事前に合意を得ているので、請負者は所有者と打ち合わせを行うよう規定している。→許可の取り付けではない。)</p> <p>(1) 請負者は、架空線の近くで工事を行う場合は、必要に応じて架空線の管理者の立会を依頼しなければならない。→E3.2.2(1)(a)に規定済み</p>	<p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. Generally</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) If the Contractor is required to perform any work in connection with the Overhead Services, full details of such work shall be given by the Employer in the Bidding Documents (Technical Specification and Drawings).</p> <p>(3) If any Overhead Services are the property of the Employer, this shall be stated clearly and the route, size, purpose of each shall be described and shown. If services are to remain live and functional throughout the Time for Completion of the Works or if they are to be removed and if so by whom shall also be described.</p> <p>(4) If any of the Overhead Services are the property of a legally constituted public authority or a third party, this shall be stated clearly and the owner, route, size, purpose of each shall be described and shown. If it is to remain live and functional throughout the Time for Completion of the Works or if it is to be removed and if so by whom, (i.e. the authority or third party or the Contractor) shall also be described. The Bidding Documents shall also describe or include the procedures and requirements (including responsibility for insurance and safety procedures) of the authority or third party if the Contractor is to carry out the work.</p>	<p>3.2. OVERHEAD SERVICES</p> <p>JC: 地下埋設物に同じコメント。ガイダンスは不要。施設の所有者に着目する必要はない。安全に関する記述に絞る。 Same comment as the Underground Service. It is not necessary to give a guidance here. Also, it is not required to pay attention who is the owner of the service. Focus on stating safety matters.</p> <p>NK: Related items are deleted.</p> <p>3.2.1.General</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) If applicable, the Contractor is required to perform any work in connection with the Overhead Services, full details of such work shall be given by the Employer in the Contract (Technical Specification and Drawings).</p> <p>JC: (2) is modified because it is guidance the Employer. NK: JICA's draft is modified as (2) in right.</p> <p>JC: (3) and (4) are deleted. These are guidance notes. NK (3) to (4) are deleted and moved to the User Guide.</p> <p>(3) If any Overhead Services are the property of the Employer, this shall be stated clearly and the route, size, purpose of each shall be described and shown. If services are to remain live and functional throughout the Time for Completion of the Works or if they are to be removed and if so by whom shall also be described.</p> <p>(4) If any of the Overhead Services are the property of a legally constituted public authority or a third party, this shall be stated clearly and the owner, route, size, purpose of each shall be described and shown. If it is to remain live and functional throughout the Time for Completion of the Works or if it is to be removed and if so by whom, (i.e. the authority or third party or the Contractor) shall also be described. The Bidding Documents shall also describe or include the procedures and requirements (including</p>	<p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p>

	<p>(5) In the case of Overhead Services which are the property of a legally constituted public authority or a third party, the Employer shall consult with such authority or third party before Bids are requested and obtain their legally binding agreement of the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures) of the authority or third party.</p> <p>After award the Contractor (accompanied by a representative of the Employer and Engineer) may consult with the authority or third party and execute the works according to the requirements of the Contract and the instructions of the Engineer.</p> <p>(6) Alternatively, the Contractor shall cooperate with the authority or third party and/or their contractors if such authority or third party are to perform the works themselves in accordance with the requirements of GC 4.6 [Co-operation]. If this alternative is to apply, the Employer shall clearly state this in the Bidding Documents and provide all relevant detail e.g. who will be performing the work, when and how and what (if anything) the Contractor is to provide.</p> <p>3.2.2. Preparation and Work Planning</p> <p>(1) Where Overhead Services are the property of a legally constituted public authority or a third party and the Contractor is required under the Contract to perform work thereon or to protect same, the Contractor shall make the following preparations prior to commencing the related work for protecting, diverting, removing, replacing or the like all as specified in the Bidding Documents:</p> <p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner's representative of the public authority or third party, emergency call list and communication system;</p> <p>(b) (Accompanied by a representative of the Employer and Engineer) the</p>	<p>responsibility for insurance and safety procedures) of the authority or third party if the Contractor is to carry out the work.</p> <p>NK: Replaced (5) & (6) as well as 3.1.1 (3).</p> <p>(5) In the case of Overhead Services which are the property of a legally constituted public authority or a third party, the Employer shall consult with such authority or third party before Bids are requested and obtain their legally binding agreement of the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures) of the authority or third party.</p> <p>After award the Contractor (accompanied by a representative of the Employer and Engineer) may consult with the authority or third party and execute the works according to the requirements of the Contract and the instructions of the Engineer.</p> <p>(6) Alternatively, the Contractor shall cooperate with the authority or third party and/or their contractors if such authority or third party are to perform the works themselves in accordance with the requirements of GC 4.6 [Co-operation]. If this alternative is to apply, the Employer shall clearly state this in the Contract Bidding Documents and provide all relevant detail e.g. who will be performing the work, when and how and what (if anything) the Contractor is to provide.</p> <p>3.2.2. Preparation and Work Planning</p> <p>(1) Where Overhead Services are the property of a legally constituted public authority or a third party and the Contractor is required under the Contract to perform work thereon or to protect same, the Contractor shall make the following preparations prior to commencing the related work for protecting, diverting, removing, replacing or the like all as specified in the Contract Bidding Documents:</p> <p>JICA: It is not proper to pay attention to the owner of the service. (As commented in 3.1.2)</p> <p>NK: 3.2.2 is specified as same as 3.1.2.</p> <p>NK: In the Japanese version, submittal of Method Statement is specified. The submittal is specified in Chapter 1, so not mentioned here to avoid duplication.</p> <p>(a) Prepare a <u>detailed Method Statement</u> describing the measures for carrying out the</p>	<p>(3) In the case of the Overhead Services which are the property of a legally constituted public authority or a third party (called as "the owner of Overhead Services"), the Contractor shall take the procedure for the works mentioned in (4) below.</p> <p>(4) In accordance with the legally binding agreement between the Employer and the owner of Overhead Services obtained by the Employer regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works according to the requirements of the Contract and the instructions of the Engineer.</p> <p>3.2.2. Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Overhead Services or the Employer, emergency call list and communication system;</p> <p>(2) In the case of Overhead Services which are the property of the owner of Overhead</p> <p>(a) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner of Overhead Services, give notice of work commencement, obtain further details of the location, content and condition of the Overhead Services for the required works,</p>
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<p>3.2.2 充電した架空線の近くでの工事の現場管理</p> <p>請負者は、充電した架空線の近くで行う工事では、次のうち必要な措置を講じなければならない。</p> <p>(1) 当該国の法律又は架空線の管理者の規則に従い、作業の実施前に架空線の管理者と作業日程、作業方法、防護措置、架空電線の管理者の立会い等について十分打ち合わせる。→E3.2.2 (1)(b)に規定済み(内容、表現は異なる)</p> <p>(2) くい打機、くい抜き、移動式クレーン、ダンプトラック等の建設機械を使用する作業において、作業中に当該充電電路に建設機械が接触し、又は接近することにより感電の危険が生ずるおそれのあるときは、請負者は必要に応じて次の措置を講じなければならない。→E3.2.2 (1)(d)に規定済み(一部主旨)</p> <p>(a) 充電電路への絶縁用防護管の装着→E3.2.3 (7)に規定済み</p>	<p>Contractor may consult with the owner's representative of the public authority or third party, give notice of work commencement, obtain further details of the location, content and condition of the Overhead Services, of the required works, requirements and procedures of the owner;</p> <p>(c) Obtain particular information from the owner's representative on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(d) Protect the Overhead Services in accordance with the Contract and the instructions of the owner's representative of the public authority or third party and the Engineer.</p> <p>(7) Where Overhead Services are the property of the Employer, the Contractor shall make necessary preparations as in 3.2.2. above and perform the work in connection with the Overhead Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>3.2.3. Requirements and Precautions</p> <p>Unless otherwise specified in the Bidding Documents, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the Time for Completion of the Works.</p> <p>(2) Adequately test all Overhead Services after completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(3) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity</p>	<p>required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner's representative of the public authority or third party, emergency call list and communication system;</p> <p>JC: こっちで記述 Describe this content in the Method Statement.</p> <p>NK: Required items are to be described in the Method Statement as provided in (a).</p> <p>(b) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner's representative of the public authority or third party, give notice of work commencement, obtain further details of the location, content and condition of the Overhead Services, of the required works, requirements and procedures of the owner;</p> <p>(c) Obtain particular information from the owner's representative on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(d) Protect the Overhead Services in accordance with the Contract and the instructions of the owner's representative of the public authority or third party and the Engineer.</p> <p>(2) Where Overhead Services are the property of the Employer, the Contractor shall make necessary preparations as in 3.2.2. above and perform the work in connection with the Overhead Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>3.2.3. Requirements and Precautions</p> <p>JC: 日本語版のように充電電路に話を限って論じてよいと思う。 It is better to mention provision focusing only on charged circuit as the Japanese version does.</p> <p>NK: As drafted there are various overhead services, therefore 3.2.3 will specify including charged lines as commented.</p> <p>Unless otherwise specified in the Contract Bidding Documents, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately test all Overhead Services after completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>JC: Does the Contractor divert overhead services?</p>	<p>requirements and procedures of the owner of Overhead Services;</p> <p>(b) Obtain particular information from the owner of Overhead Services on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(c) Protect the Overhead Services in accordance with the Contract and the instructions of the owner of Overhead Services and the Engineer.</p> <p>(3) Where Overhead Services are the property of the Employer, the Contractor shall make necessary preparations as in 3.2.2 (2) and perform the work in connection with the Overhead Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>Unless otherwise specified in the Contract Bidding Documents, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately After the test of Overhead Services after at the completion of any diversion, replacement or alteration work by the owner of Overhead Services or the Employer, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p>
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- (b) 充電電路の位置を明示する看板等の設置
→E3.2.3 (6)に規定済み
- (c) 建設機械の旋回・立入区域等の設定
→E3.2.3 (8)(9)に規定済み
- (d) 本仕様書 2.4 [監視員、誘導員の配置]に従い、監視員を配置すること。→E3.2.3 (10)に規定済み
- (3) 建設機械、ワイヤロープ等が目測上の誤差等により、離隔距離内に入ることを防止するために、建設機械の行動範囲を規制するための柵等の設置、建設機械のジブ等の行動範囲を制限するために目立つ小旗を取り付けた防護ゲート等を設けること。→E3.2.3 (6)に規定済み
- (4) 請負者の要員の身体、建設機械の先端やワイヤロープ、工具、材料等は、充電電路に対して安全な離隔距離を保つこと。離隔距離は、次表に示す値、当該国の法律で規定する値、又は送配電線類の管理者の規定する値のうち最大の値とすること。
→E3.2.3 (11)に規定済み

電路の電圧	離隔距離
特別高圧 (7000V 以上)	2m ただし、60,000 以上は 1m 又はその端数を増すごとに 2m
高圧 (600V 以上 7000V 以下)	1.2m
低圧 (600V 以下)	1m

- of any Overhead Services conveying flammable, combustible or explosive liquids or gases.
- (4) Be aware of and avoid all risk of electric shock when working near any cables or wires to ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.
 - (5) Be aware of and avoid all risk of subsidence or collapse of support structures of Overhead Services due to excavations or other being too close.
 - (6) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.
 - (7) Provide insulating protective pipe to the Overhead Services.
 - (8) Create safe zones by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers and prohibit entry outside these ranges.
 - (9) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.
 - (10) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [*Spotters, Flagmen and the Like*] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.
 - (11) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

NK: Such works will be made by the owner or the Employer unless otherwise specified in the Contract. The sentence is modified as right to ensure the safety of the Services before the Contractor commence his works.

~~(3) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Overhead Services conveying flammable, combustible or explosive liquids or gases.~~

JC: Is such situation possible with overhead services?

NK: There is possibility that fire occurs when the Contractor work with welding, etc. below the Overhead Services and fire transmitted to the Services. Fire prevention is specified in 1.22 Fire Prevention, so (3) will be deleted.

- (4) Be aware of and avoid all risk of electric shock when working near any cables or wires to ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.
- (5) Be aware of and avoid all risk of subsidence or collapse of support structures of Overhead Services due to excavations or other being too close.
- (6) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.
- (7) Provide insulating protective pipe to the Overhead Services.
- (8) Create safe zones by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers and prohibit entry outside these ranges.
- (9) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.
- (10) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [*Spotters, Flagmen and the Like*] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.
- (11) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

JICA: What does this ("entry outside" in (8) mean?

NK: The expression is modified as "prohibit entering these ranges".

- (8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.
- (9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [*Spotters, Flagmen and the Like*] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.
- (10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

- (3) Be aware of and avoid all risk of electric shock when working near any cables or wires to ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.
- (4) Be aware of and avoid all risk of subsidence or collapse of support structures of Overhead Services due to excavations or other being too close.
- (5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.
- (6) Provide insulating protective pipe to the Overhead Services.
- (7) Create safe zones by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers and prohibit entry outside entering these ranges.
- (8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.
- (9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [*Spotters, Flagmen and the Like*] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.
- (10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

- (8) 請負者は、架空線の充電電路の近くでの作業の開始前には、当該作業の作業員及び監視員に次を周知徹底すること。→E3.2.4 に規定済み
- (a) 充電電路の位置→E3.2.4 (1)に規定済み
- (b) 充電電路の感電の危険性→E3.2.4 (2)に規定済み
- (c) 充電電路からの離隔距離→E3.2.4 (3)に規定済み
- (d) 作業手順→E3.2.4 (4)に規定済み
- (e) 当該作業現場における感電予防措置→E3.2.4 (5)に規定済み
- (f) 使用すべき保護具→E3.2.4 (6)に規定済み
- (g) 本仕様書 3.2.2 (6)に基づく感電事故発生時の対応→E3.2.4 (7)に規定済み
- (h) 本仕様書 1.11[救急救護計画]に基づく感電事故発生時の救援救護方法→E3.2.4 (8)に規定済み

(12) Prepare as-built drawings of Overhead Services after completion of the associated work showing accurate positions, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.

shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

(8) Prepare as-built drawings of Overhead Services after completion of the associated work showing accurate positions, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.

JC: (8) It is better not to extend the scope of the JSSS to the operation stage.

NK: (8) is for safety in future. Overhead Services are different from Underground Services as they can be identified directly. Therefore, (8) is deleted

3.2.4. Information to Contractor's Personnel

Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following:

- (1) Location of live cables and equipment.
- (2) Risk of electric shock from live cables or equipment.
- (3) Separation distances from live cables and equipment.
- (4) Work procedure.
- (5) Preventive measures against electric shock.
- (6) PPE to be used.
- (7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.2.5 and JSSS 3.2.6.
- (8) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response

3.2.4. Information to Contractor's Personnel

JC: 3.1.4 に全く同じでは? This seems to be exactly same as 3.1.4?

NK: Modified as right.

Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following:

- (1) Location of live cables and equipment.
- (2) Risk of electric shock from live cables or equipment.
- (3) Separation distances from live cables and equipment.
- (4) Work procedure.
- (5) Preventive measures against electric shock.
- (6) PPE to be used.

the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

3.2.4 Information to Contractor's Personnel

Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following **in addition to JSSS 3.1.4 (1) to (6):**

- (1) Accident training and response measures to an electric shock accident in accordance with JSSS 3.2.5.
- (2) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan].
- (3) Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services.

<p>(5) 感電事故発生時には次の対応を行うこと。→規定なし(以下を英文に追加すべきと考える。)</p> <p>(a) 充電電路の管理者に直ちに報告すること。</p> <p>(b) 充電電路により感電した建設機械の車体や吊り荷には作業員を絶対に触らせないようにし、また、当該建設機械から作業員を遠ざけること。</p> <p>(c) 充電電路により感電した建設機械の運転手が感電していない場合、運転手に直ちに建設機械を充電電路から遠ざけさせること。遠ざけさせることができない場合は、充電電路が通電停止になるまで運転手を機体内に待機させること。</p> <p>(d) 二次感電被害防止のため、絶縁用保護具・救出方法についての教育を受けたもの以外には、感電状況にある者の救出をさせてはならない。</p> <p>(e) 法感電による心肺停止の被災者には、直ちに心肺蘇生や自動体外式除細動器(AED)の使用等の一次救命処置を施すこと。</p>	<p><i>Plan</i>].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services.</p> <p>3.2.5. Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.20 [<i>Accident Response Plan</i>].</p>	<p>(7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.2.5 and JSSS 3.2.6.</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.20 [<i>Accident Response Plan</i>].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services.</p> <p>3.2.5. Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.20 [<i>Accident Response Plan</i>].</p> <p>NK: JSSS 1.20 [<i>Accident Response Plan</i>] Issue 7 specified about the electric shock accident as shown in 3.1.5 as same as Japanese (5)</p>	<p>3.2.5. Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [<i>Accident Response Plan</i>].</p>
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JICA Standard Safety Specification Preparation Study
B1 3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES (English R3 for Issue 3)

2019.9.10 Japanese Final
 2020.1.31 NK Draft Eng. R1
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 2020.2.25 NK R2
 2020.3.6 JICA Comment
 2020.3.13 NK R3

JSSS in English R2 for Issue 3 (2020/2/25)	JICA Comments on R2(2020/3/6) JC: JICA comments and revision in blue letters and underlined Red letters: last revision in R2 draft, NK: NK actions	JSSS in English R3 for Issue 3 (2020/3/13) Blue letters: JICA revised on the draft R2
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	<p>JC: e-mail from Mr. Ito on 2020/3/6</p> <p>3章の Utility に関する 4 段表ですが、以下の点において、こちらからの要求事項を十分に満たしているものとは判断しかねます。</p> <p>① 4 段表の右から 2 段目の経緯に残っている通り、当方の願いは「ユーティリティの所有者別」で検討をすすめるのではなく、「ユーティリティが埋まっていることが分かっている場合とわかっていない場合」に分けて記述してください、というものです。</p> <p>「NK: As shown in 3.1.2 (2) (a) ~ (d) of this section in yellow are added as provide in Japanese draft. Item (2) is added for response to the JICA comments to specify two cases.」というような検討経緯がついていますが、結果としてこちらの要求する形に直っていません。(下記②も参照)</p> <p>② 例えば 3.1.2 の(2)と(3)が論理的な対比をなしていません。(2)は第三者がオーナーの場合、(3)は「ユーティリティが埋まっていることが分からない場合」です。そして(4)で一転再び発注者がオーナーの場合となっており、論理的に素直に流れていきません。</p> <p>英文がすでに Owner が誰かに着目した分類で記述されているので、その趣旨を殺さないように心がけながら修文してみました。これで今一度ご確認ください。</p> <p>今回は修正すべき事項が多いため、一番右の列だけ抜き出して、コメントを付けています。</p> <p>また、先般打ちあわせ通り、数か月後にまとまった形になったところで、全体を鳥瞰する形で内容確認をさせて頂きたいと考えているので、その際は今回コメントの対象としなかった部分についても、コメントする可能性がある点を含みおいてください。</p> <p>JC: e-mail from Mr. Ito on 2020/3/6</p> <p>We cannot judge that our requests are fully reflected in the last draft R2 regarding the following points:</p> <p>① Our requests are not to improve the description for different owners of underground</p>	

	<p>utilities but to specifies for two cases of utilities which existence is known and not known.</p> <p>NK responded to our comments as “NK: As shown in 3.1.2 (2) (a) ~ (d) of this section in yellow are added as provide in Japanese draft. Item (2) is added for response to the JICA comments to specify two cases.”. However, as thee results, these do not meet our requests.</p> <p>② For example, (2) and (3) in 3.1.2 are not logically contrast. (2) is for the case of the utility which owner is a third party. (3) is for the case of underground utility which existing is not known. Then (4) is for the case of utility which owner is the Employer. These do not logically flow.</p> <p>We modified the draft paying attention not to change the original intention as the original was prepared on the basis of different owners. Please review them.</p> <p>As there are many revisions required, the draft R2 are copied to other sheets and added our comments on them.</p> <p>Please keep in your mind, we are planning to review (bird's eye view) whole document of JSSS which will be submitted us after several months as discussed last time and there is a possibility we will give more comments to items to which we have not commented this time.</p>	
<p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1.General</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), and which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third party (called as “the owner of Underground or Concealed Services”), the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p> <p>(4) In accordance with the legally binding agreement between the Employer and the owner of Underground or Concealed Services obtained by the Employer regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission of the owner of Underground or Concealed Services to execute the work according to the requirements of the Contract and the instruction of the Engineer.</p>	<p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 General</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), and which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third party (called as “the owner of Underground or Concealed Services”), the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p> <p>JC: 単に third party でよいと思います。 JC think it is better to simply “third part”.</p> <p>JC: この後、owner が発注者であろうが、第三者であろうが owner という言葉で理解できるように記述するために削除します。 After this, the sentence is deleted to specify owner is any of the Employer and third party.</p> <p>NK: modified as commented.</p> <p>(4) In accordance with the legally binding agreement between the Employer and the owner of Underground or Concealed Services obtained by the Employer regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission of the owner of Underground or Concealed Services to execute the work according to following the preparations described in JSSS 3.1.2 as well as the requirements of the Contract and the instruction of the Engineer.</p> <p>JC: コントラクターにとっては結果が大事(障害なく着工できることが大事)であり、発</p>	<p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 General</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”) which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of Underground or Concealed Services which are the property of a third party, the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p> <p>(4) In accordance with the agreement between the Employer and the owner of Underground or Concealed Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission to execute the work following the preparations described in JSSS 3.1.2 as well as the requirements of the Contract and the instruction of the Engineer.</p>

<p>3.1.2. Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system;</p> <p>(2) In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third;</p>	<p>注者と Utility オーナーとの関係が legally binding か否かは関係ありません。</p> <p>For the Contractor, it is important that they can commence the Works without any obstacle. It is not matter whether the relation between the Employer and the owner of utility is bounded legally or not.</p> <p>JC: 全体として、発注者・エンジニアの支援の下、3. 1.2 の準備作業を行い、オーナーからの工事許可を得る、という流れになります。</p> <p>The flow of activity of the Contractor is 1) preparation work mentioned in 3.1.2 with assistance of the Employer and the Engineer, and 2) obtaining permission of works from the owner.</p> <p>NK: modified as commented.</p> <p>(5) In the case of Underground or Concealed Services which are the property of the Employer, the Contractor shall take the necessary procedure for the work in accordance with the Contract. the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.</p> <p>JC: (4)と(5)が論理的な対比になっていません。(4)はオーナーによる permission を論じているのに対し、(5)は「契約に従って行うこと」になっています。「オーナーによる permission を取得すること」に着目した対比であるべきです。発注者がオーナーである場合、当然かかる permission は所与のものであるべきものです。</p> <p>(4) and (5) are not logically contrast. (4) is described permission of the owner, however (5) is “in accordance with the Contract”. (5) shall be specified focusing “to get permission of the owner” as contrast of (4). In case that the owner is the Employer, the permission shall be already given.</p> <p>NK: modified as commented.</p> <p>3.1.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system; In case the details of Underground or Concealed Services (position, depth, route and specifications for relocation/protection, etc.), the Contractor shall carry out the following preparatory work prior to the commencement of the work:</p> <p>(2) In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third:</p> <p>(a) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system;</p> <p>JC: 以下、owner という言葉が出てきますが、これは発注者であろうが、第三者であろうが区別する必要はないと思います。</p> <p>JC considers it is not necessary to distinguish the Employer or the third party as the owner after this.</p> <p>NK: modified as commented.</p>	<p>(5) In the case of Underground or Concealed Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.</p> <p>3.1.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) In case the details of Underground or Concealed Services (position, depth, route and specifications for relocation/protection, etc.), the Contractor shall carry out the following preparatory work prior to the commencement of the work:</p> <p>(a) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system;</p> <p>(b) The Contractor may consult with the owner of Underground or Concealed Services, give notice of work commencement, obtain</p>
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<p>(a) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner of Underground or Concealed Services, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, of for the required works, requirements and procedures of the owner of Underground or Concealed Services;</p> <p>(b) Obtain particular information from the owner of Underground or Concealed Services on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and</p> <p>(c) Provide and use cable avoidance tools such as Cable Locator, and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>(d) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner of Underground or Concealed Services and the Engineer.</p> <p>(e) The Method Statement shall be revised based on the information obtained from the owner of Underground or Concealed Services and the exploratory hand excavation.</p> <p>(3) In the case of Underground or Concealed Services which existence are predicted at the Site by the Contractor, but not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services and submit it to the Engineer.</p> <p>(b) Following the instruction by the Engineer regarding the proposal, create Method Statement showing the type, the owner of</p>	<p>(b) (Accompanied by a representative of the Employer and Engineers) the Contractor may consult with the owner of Underground or Concealed Services, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, of for the required works, requirements and procedures of the owner of Underground or Concealed Services;</p> <p>JC: 3.1.1で発注者の reasonable assistance に言及しているので不要。またこれを消すことで、ownerが発注者であろうが、第三者であろうが、意味が通じる文章になります。</p> <p>It is not necessary as 3.1.1 has described “reasonable assistance”. By deleting this sentence, (b) becomes to specify for both owners (the Employer and the third party).</p> <p>JC: これはいらぬような気がします。「工事を”するために必要な地下埋設物」というように読めるような気がするからです。ここで論じているのは、保護をかけるような必要がある地下埋設物</p> <p>“of the required works” seems not necessary because JC think it may be read as “Underground Services required for the Works”. (b) specifies about Underground Services to be protected.</p> <p>NK: modified as commented.</p> <p>(c) Obtain particular information from the owner of Underground or Concealed Services on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and</p> <p>(d) Provide and use cable avoidance tools such as Cable Locator, and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>(e) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner of Underground or Concealed Services and the Engineer.</p> <p>(f) The Method Statement shall be revised based on the information obtained from the owner of Underground or Concealed Services and the exploratory hand excavation.</p> <p>(2) In the case of Underground or Concealed Services which existence are predicted at the Site by the Contractor, but details are not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>JC: このスペックは入札書類に含まれる文書なので、ここに「コントラクターによって予見される」というのは不適切です。</p> <p>As the JSSS is included in bid documents, it is not proper to mention “existence is predicted at the Site by the Contractor”.</p> <p>NK: modified as commented.</p> <p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services and submit it to the Engineer.</p> <p>(b) Following the instruction by the Engineer regarding the proposal,</p>	<p>further details of the location, content and condition of the Underground or Concealed Services, requirements and procedures of the owner of Underground or Concealed Services;</p> <p>(c) Obtain particular information from the owner of Underground or Concealed Services on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and</p> <p>(d) Provide and use cable avoidance tools such as Cable Locator, and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>(e) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner of Underground or Concealed Services and the Engineer.</p> <p>(f) The Method Statement shall be revised based on the information obtained from the owner of Underground or Concealed Services and the exploratory hand excavation.</p> <p>(2) In case Underground or Concealed Services of which existence are predicted at the Site, but details are not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services and submit it to the Engineer.</p> <p>(b) Following the instruction by the Engineer regarding the proposal, create Method Statement showing the type, the owner of</p>
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<p>Underground or Concealed Services and location of assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation.</p> <p>(c) (Accompanied by a representative of the Employer and Engineer) consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(d) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p>(4) Where Underground or Concealed Services are the property of the Employer, the Contractor shall make relevant preparations as in JSSS エラー! 参照元が見つかりません。 (2) and (3) and perform the work in connection with the Underground or Concealed Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>(5) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the work.</p> <p>(6) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3. Requirements and Precautions</p> <p>Unless otherwise specified in the Contract, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground.</p> <p>(3) Restore surface paving with material and methods specified, paying attention not leaving difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(4) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to</p>	<p>create Method Statement showing the type, the owner of Underground or Concealed Services and location of assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation,</p> <p>(c) (Accompanied by a representative of the Employer and Engineer) consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(d) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p>(3) Where Underground or Concealed Services are the property of the Employer, the Contractor shall make relevant preparations as in JSSS エラー! 参照元が見つかりません。 (2) and (3) and perform the work in connection with the Underground or Concealed Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>JC: as commented, not necessary to separately specify (3)) for the Employer's property.. JC: deleted.</p> <p>(3) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the work.</p> <p>JC: 今までも議論があったと思いますが、一律2メートルの範囲で禁止というのはやりすぎです。 It is excessive to specify not to be allowed within 2m for all cases as already discussed</p> <p>NK: modified as commented.</p> <p>(4) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Contract, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground.</p> <p>(3) Restore surface paving with material and methods specified, paying attention not leaving difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(4) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to</p>	<p>Underground or Concealed Services and location of assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation,</p> <p>(c) Consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(d) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p>(3) Machine excavation shall not be allowed when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the work.</p> <p>(4) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Contract, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground.</p> <p>(3) Restore surface paving with material and methods specified, paying attention not leaving difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(4) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p>
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<p>ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(5) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(6) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(7) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(8) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [<i>Spotters, Flagmen and the Like</i>] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(10) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(11) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(12) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.</p>	<p>ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(5) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(6) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(7) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(8) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [<i>Spotters, Flagmen and the Like</i>] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(10) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(11) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(12) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.</p>	<p>(5) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(6) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(7) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(8) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [<i>Spotters, Flagmen and the Like</i>] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(10) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(11) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(12) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.</p>
<p>3.1.4. Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(1) Location of live cables and equipment.</p> <p>(2) Risk of electric shock from live cables or equipment.</p> <p>(3) Separation distances from live cables and equipment.</p> <p>(4) Work procedure,</p> <p>(5) Preventive measures against electric shock,</p> <p>(6) PPE to be used.</p> <p>(7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5.</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.20 [<i>Accident Response Plan</i>].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p>	<p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(1) Location of live cables and equipment.</p> <p>(2) Risk of electric shock from live cables or equipment.</p> <p>(3) Separation distances from live cables and equipment.</p> <p>(4) Work procedure,</p> <p>(5) Preventive measures against electric shock,</p> <p>(6) PPE to be used.</p> <p>(7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5.</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.20 [<i>Accident Response Plan</i>].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p>	<p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(1) Location of live cables and equipment.</p> <p>(2) Risk of electric shock from live cables or equipment.</p> <p>(3) Separation distances from live cables and equipment.</p> <p>(4) Work procedure,</p> <p>(5) Preventive measures against electric shock,</p> <p>(6) PPE to be used.</p> <p>(7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5.</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.20 [<i>Accident Response Plan</i>].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p> <p>3.1.5 Electrical Safety Training and Accident Measures</p>

<p>3.1.5. Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [Accident Response Plan].</p>	<p>3.1.5 Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [Accident Response Plan].</p>	<p>Refer to JSSS 1.21 [Accident Response Plan].</p>
<p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of the Overhead Services which are the property of a legally constituted public authority or a third party (called as “the owner of Overhead Services”), the Contractor shall take the procedure for the works mentioned in (4) below.</p> <p>(4) In accordance with the legally binding agreement between the Employer and the owner of Overhead Services obtained by the Employer regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works according to the requirements of the Contract and the instructions of the Engineer.</p> <p>3.2.2. Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Overhead Services or the Employer, emergency call list and communication system;</p> <p>(2) In the case of Overhead Services which are the property of the owner of Overhead</p> <p>(a) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner of Overhead Services, give notice of work commencement, obtain further details of the location, content and condition of the</p>	<p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of the Overhead Services which are the property of a legally constituted public authority or a third party (called as “the owner of Overhead Services”), the Contractor shall take the procedure for the works mentioned in (4) below.</p> <p>(4) In accordance with the legally binding agreement between the Employer and the owner of Overhead Services obtained by the Employer regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works according to following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.</p> <p>JC: (3)~(5)については地下埋設と同様になるように修正。 (3) to (4) are modified and (5) is added to be similar to 3.1.1. NK: modified as commented.</p> <p>3.2.2. Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Overhead Services or the Employer, emergency call list and communication system;</p> <p>(2) In the case of Overhead Services which are the property of the owner of Overhead</p> <p>(a) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner of Overhead Services, give notice of work commencement, obtain further details of the location, content and condition of the Overhead Services for the required works, requirements and</p>	<p>3.2 OVERHEAD SERVICES</p> <p>3.2.1 General</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of the Overhead Services which are the property of a third party, the Contractor shall take the procedure for the works mentioned in (4) below.</p> <p>(4) In accordance with the agreement between the Employer and the owner of Overhead Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.</p> <p>(5) In the case of Overhead Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.2.2.</p> <p>3.2.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Overhead Services or the Employer, emergency call list and communication system;</p> <p>(2) Wherever necessary, the Contractor shall:</p> <p>(a) Consult with the owner of Overhead Services, give notice of work commencement, obtain further details of the location, content and condition of the Overhead Services, requirements and procedures of the owner of Overhead Services;</p>

<p>Overhead Services for the required works, requirements and procedures of the owner of Overhead Services;</p> <p>(b) Obtain particular information from the owner of Overhead Services on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(c) Protect the Overhead Services in accordance with the Contract and the instructions of the owner of Overhead Services and the Engineer.</p> <p>(3) Where Overhead Services are the property of the Employer, the Contractor shall make necessary preparations as in 3.2.2 (2) and perform the work in connection with the Overhead Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>Unless otherwise specified in the Contract Bidding Documents, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately After the test of Overhead Services after at the completion of any diversion, replacement or alteration work by the owner of Overhead Services or the Employer, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(3) Be aware of and avoid all risk of electric shock when working near any cables or wires to ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(4) Be aware of and avoid all risk of subsidence or collapse of support structures of Overhead Services due to excavations or other being too close.</p>	<p>procedures of the owner of Overhead Services;</p> <p>JC: これはいろいろな気がします。「工事をするために必要な電源」というように読めるような気がするからです。ここで論じているのは、保護をかけるような必要がある電線</p> <p>“for the required works” seems not necessary because JC think it may be read as “Overhead Services required for the Works”. (b) specifies about Overhead Services to be protected.</p> <p>NK: deleted as commented.</p> <p>(b) Obtain particular information from the owner of Overhead Services on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(c) Protect the Overhead Services in accordance with the Contract and the instructions of the owner of Overhead Services and the Engineer.</p> <p>(3) Where Overhead Services are the property of the Employer, the Contractor shall make necessary preparations as in 3.2.2 (2) and perform the work in connection with the Overhead Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>JC: as commented, not necessary to separately specify (3) for the Employer's property. NK: deleted.</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>Unless otherwise specified in the Contract Bidding Documents, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately After the test of Overhead Services after at the completion of any diversion, replacement or alteration work by the owner of Overhead Services or the Employer, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution. Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to mitigate future risk of injury, leakage or pollution.</p> <p>JC: modified. NK: modified as commented.</p> <p>(3) Be aware of and avoid all risk of electric shock when working near any cables or wires to ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(4) Be aware of and avoid all mitigate risk of subsidence or collapse of support structures of Overhead Services due to excavations or other being too close.</p> <p>JC: avoid all risk は不可能。ここだけでなく、他の章でも出てきている可能性があると思われるので以後注意して下さい。 It is impossible to avoid all risk. Please pay attention to this, which may be specified in other clauses. NK: modified as commented.</p> <p>(5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.</p>	<p>(b) Obtain particular information from the owner of Overhead Services on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(c) Protect the Overhead Services in accordance with the Contract and the instructions of the owner of Overhead Services and the Engineer.</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>Unless otherwise specified in the Contract or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to mitigate future risk of injury, leakage or pollution.</p> <p>(3) Be aware of and avoid all risk of electric shock when working near any cables or wires to ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(4) Be aware of and mitigate risk of subsidence or collapse of support structures of Overhead Services due to excavations or other being too close.</p> <p>To MD, please review this comment and if same revision is necessary in the above (3).</p>
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- (5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.
- (6) Provide insulating protective pipe to the Overhead Services.
- (7) Create safe zones by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers and prohibit **entry outside entering these ranges**.

- (8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.
- (9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.
- (10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

3.2.4 Information to Contractor's Personnel

Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following **in addition to JSSS 3.1.4 (1) to (6)**:

- (1) Accident training and response measures to an electric shock accident in accordance with JSSS 3.2.5.
- (2) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan].

- (6) Provide insulating protective pipe to the Overhead Services.
- (7) Create safe zones by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers and prohibit **entry outside entering these ranges**.

JC: このようにした方が、(7)と(8)のつながりが良いと思います。すなわち、(7)では safe zone の設定、(8)ではその safe zone に侵入させないように機械を使用する、という流れになります。
This revised description is smooth connection between (7) and (8) as (7) specifies to create safe zone and (8) does to operate machinery without entering in the safe zone.
NK: modified as commented.

- (8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.
- (9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.
- (10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

3.2.4 Information to Contractor's Personnel

Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following **in addition to JSSS 3.1.4 (1) to (6)**:

- (1) Accident training and response measures to an electric shock accident in accordance with JSSS 3.2.5.

JC: 3.2.5 に飛んで、3.2.5 では再び 1.21 に飛んでいますが、従来までの検討では Accident Response Plan の原案は特別チームを編成せよ、といった内容に鑑み、大ナタを振るっているはずですが、1.21 がどのような内容になるのかが確認できない現状ではコメントできません。全体が提出された際に改めて検討します。

(1) specifies to refer to 3.2.5 and 3.2.5 does 1.2.1. In the last review, Accident Response Plan is requested to be drastically modified as last draft specified to establish special team. Because the content of revised 1.21 cannot be confirmed,

- (5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.
- (6) Provide insulating protective pipe to the Overhead Services.
- (7) Create **safe zones** free from danger arising from use of Contractor's Equipment by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers.

To MD: Is this "safe zones" to be replaced with "dangerous zones" in (7) and (8) because (8) specifies to prevent Equipment entering the safety zone?

- (8) Prevent Contractor's Equipment, wire ropes or chains from **entering the safe zones** and limit the moving range of crane jibs and other high equipment.
- (9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.
- (10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

3.2.4 Information to Contractor's Personnel

Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following **in addition to JSSS 3.1.4 (1) to (6)**:

- (1) Accident training and response measures to an electric shock accident in accordance **with JSSS 3.2.5**.

<p>(3) Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services.</p> <p>3.2.5. Electrical Safety Training and Accident Measures Refer to JSSS 1.21 [Accident Response Plan].</p>	<p>JICA cannot comment now. After all JSSS is submitted, JICA will review this again.</p> <p>NK: It leaves as it is tentatively.</p> <p>(2) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan].</p> <p>(3) Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services.</p> <p>JC: May we know why this specifies “other”?</p> <p>NK: ask to MD about this.</p> <p>3.2.5. Electrical Safety Training and Accident Measures Refer to JSSS 1.21 [Accident Response Plan].</p> <p>JC: 上記 3.2.4 に対するコメント参照. Please refer to the comment to above (1).</p> <p>NK: It leaves as it is tentatively.</p>	<p>(2) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan].</p> <p>(3) Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services.</p> <p>MD: Please add or modify (3) to make clear “other”</p> <p>3.2.5 Electrical Safety Training and Accident Measures Refer to JSSS 1.21 [Accident Response Plan].</p>
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JICA Standard Safety Specification Preparation Study
CHAPTER 3: UNDERGROUND AND OVERHEAD SERVICES (English Issue 3)

2019.9.10 Japanese Final
2020.1.31 NK Draft Eng. R1
2019.12.4 NK Issue 2
2019.12.19 JICA Comment
2020.2.25 NK R2
2020.3.6 JICA Comment
2020.3.13 NK R3
2020.4.9 NK English R3

JSSS in English R3 for Issue 2	JSSS in English Issue 3 (2020/03/22) With comments by MD	JSSS in English Issue 3 (2020/04/12) 赤字: NK コメント・対応案
<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. General</p> <p>3.1.2. Preparation and Work Planning</p> <p>3.1.3. Requirements and Precautions</p> <p>3.1.4. Information to Contractor’s Personnel</p> <p>3.1.5. Electrical Safety Training and Accident Measures</p> <p>3.2 OVERHEAD SERVICES</p> <p>3.2.1. General</p> <p>3.2.2. Preparation and Work Planning</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>3.2.4 Information to Contractor’s Personnel</p> <p>3.2.5. Electrical Safety Training and Accident Measures</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. Generally</p> <p>3.1.2. Preparation and Work Planning</p> <p>3.1.3. Requirements and Precautions</p> <p>3.1.4. Information to Contractor’s Personnel</p> <p>3.1.5. Electrical Shock Treatment</p> <p>3.2 OVERHEAD SERVICES</p> <p>3.2.1. General</p> <p>3.2.2. Preparation and Work Planning</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>3.2.4 Information to Contractor’s Personnel</p> <p>3.2.5. Electrical Shock Treatment</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. Generally</p> <p>3.1.2. Preparation and Work Planning</p> <p>3.1.3. Requirements and Precautions</p> <p>3.1.4. Information to Contractor’s Personnel</p> <p>3.1.5. Electrical Shock Treatment</p> <p>3.2 OVERHEAD SERVICES</p> <p>3.2.1. General</p> <p>3.2.2. Preparation and Work Planning</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>3.2.4 Information to Contractor’s Personnel</p> <p>3.2.5. Electrical Shock Treatment</p>
<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 General</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”) which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of Underground or Concealed Services which are the property of a third party, the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p> <p>(4) In accordance with the agreement between the Employer and the owner of Underground or Concealed Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission to execute the work following the preparations described in JSSS 3.1.2</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 Generally</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p><i>I have added the following as in any event it should apply; compliance with such procedures is usually mandatory and non-compliance will impact upon safety:</i></p> <p>(2) If Underground or Concealed Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the authority.</p> <p><i>Reference now included in the User Guide:</i></p> <p>(3) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(4) In the case of Underground or Concealed Services which are the property of a third party, the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 Generally</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p>(2) If Underground or Concealed Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the authority.</p>

as well as the requirements of the Contract and the instruction of the Engineer.

- (5) In the case of Underground or Concealed Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.

As commented before and explained in January, why is all of this text relating to property ownership, permissions and contact with utility companies necessary, when it has nothing to do with safety and it is not always correct?

Very often (if not usually) for JICA funded drainage and sewage treatment improvement projects, the executing agency is also the owner and operator of the underground and overhead utility services. In such cases the Employer and relevant authority are often one and the same and in this common case, the contact arrangements, requirements for permissions etc. stipulated in the JICA draft, do not apply.

Sometimes also for example specialist local subcontractors who are already registered with the utility authority or company are required to be used. Actual arrangements can be very different.

It is unusual and potentially risky to assume that the JICA specified arrangements apply as a common basis on all projects when they don't and I recommend that all is omitted.

I am aware that sometimes the employer may require the contractor to make improper arrangements and but this is not the norm and also sometimes also the contractor does not perform correctly. However, I understood that JSSS is a safety specification, not a contract procedural manual and I suggest that it should not be used for this latter purpose.

The following paragraph for example, is contractually and practically incorrect, the contractor has no obligation to get permission to execute the works, why should he?? If this is stated there is a strong likelihood that it will negatively affect the quality of the Bid Documents. Also, if the authority doesn't give such permission or delays in giving it, or changes the scope or working methods and timing the consequences are greatly confused. The other aspects of this clause are not relevant to safety and JSSS and have no real meaning.

The scope and requirements for all work should be investigated and clarified beforehand by the executing agency and consultant and properly specified by the Employer in the Bidding documents before requesting Bids.

- (5) In accordance with the agreement between the Employer and the owner of Underground or Concealed Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission to execute the work following the preparations described in JSSS 3.1.2 as well as the requirements of the Contract and the instruction of the Engineer.

If JSSS includes (unnecessary) requirements for permissions and contact with Utility Companies as above then it also requires to state where such requirements are not necessary i.e. where the services are owned by the employer, which was why I changed the earlier draft so it was more balanced.

However, if the former isn't required then neither is the latter.

With the benefit of more time to consider this and as also suggested by Ito san in our meeting in January to explore ways to simplify this Chapter, I strongly recommend that this Chapter should be changed:

1) To concentrate on safety matters only.

2) To delete any ownership, permissions, contact arrangements and

<p>3.1.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) In case the details of Underground or Concealed Services (position, depth, route and specifications for relocation/protection, etc.), the Contractor shall carry out the following preparatory work prior to the commencement of the work:</p> <p>(a) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system;</p> <p>(b) The Contractor may consult with the owner of Underground or Concealed Services, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, requirements and procedures of the owner of Underground or Concealed Services;</p> <p>(c) Obtain particular information from the owner of Underground or Concealed Services on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and</p> <p>(d) Provide and use cable avoidance tools such as Cable Locator, and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>(e) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner of Underground or Concealed Services and the Engineer.</p> <p>(f) The Method Statement shall be revised based on the information obtained from the owner of Underground or Concealed Services and the exploratory hand excavation.</p> <p>(2) In case Underground or Concealed Services of which existence are predicted at the Site, but details are not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation,</p>	<p>3) To include clear requirements for the Employer to carry out proper pre-bid studies and prepare precise bid documentation and that this shall be included in the User Guide.</p> <p>I have edited this Chapter and will edit the User Guide on this basis.</p> <p>(6) In the case of Underground or Concealed Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.</p> <p>3.1.2 Preparation and Work Planning</p> <p>(1) Where Underground or Concealed Services are the property of a relevant authority or a third party and the Contractor is required under the Contract to perform work thereon or to locate and protect same, Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for locating, protecting, diverting, removing, replacing or the like of any Underground or Concealed Services:</p> <p>The following added paragraph in your draft is an unnecessary duplication of the above:</p> <p>(2) In case the details of Underground or Concealed Services (position, depth, route and specifications for relocation/protection, etc.), the Contractor shall carry out the following preparatory work prior to the commencement of the work:</p> <p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon;</p> <p>(b) Prepare an emergency call list and communication procedure;</p> <p>(c) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner's representative of the relevant authority or third party, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, of the required works, requirements and procedures of the owner;</p> <p>(d) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident;</p> <p>(e) Provide and use cable avoidance tools or cable locators, trace the position and routes on ground surfaces, walls and floors of all Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area;</p> <p>Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed Services and proceed to expose and protect same or prepare for the required work; and in accordance with the Contract and the instructions of the owner's representative of the relevant authority or third party and the Engineer.</p> <p>(f) The Method Statement shall be revised based on the</p>	<p>3.1.2 Preparation and Work Planning</p> <p>(1) Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for locating, protecting, diverting, removing, replacing or the like of any Underground or Concealed Services:</p> <p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon;</p> <p>(b) Prepare an emergency call list and communication procedure;</p> <p>(c) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident;</p> <p>(d) Provide and use cable avoidance tools or cable locators, trace the position and routes on ground surfaces, walls and floors of all Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area;</p> <p>Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed Services and proceed to expose and protect same or prepare for the required work; and</p> <p>(e) The Method Statement shall be revised based on the information obtained from the above locating and exploratory work</p> <p>(2) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the excavation.</p> <p>(3) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p>
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<p>(g) Consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(h) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p>(3) Machine excavation shall not be allowed when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the work.</p> <p>(4) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Contract, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground.</p> <p>(3) Restore surface paving with material and methods specified, paying attention not leaving difference in level with surrounding pavement and replace all surface markings and signage.</p>	<p>information obtained from the above locating and exploratory work</p> <p><i>The following is not connected with safety and I do not recommend that it is included, none of this is related to safety matters which are not covered by the above. It will create misunderstanding and potential conflict, for example - what is the meaning of "existence is predicted but no detail given"? What is a "proposal" in a contract sense, "Variation"? Why such engineer's input?</i></p> <p>(3) In case Underground or Concealed Services of which existence are predicted at the Site, but details are not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services and submit it to the Engineer.</p> <p>(b) Following the instruction by the Engineer regarding the proposal, create Method Statement showing the type, the owner of Underground or Concealed Services and location of assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation.</p> <p>(c) Consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(d) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p><i>Why is the following changed? No machine excavation should start until locations and routes are explored and indicated as above and then precautions should be taken due to the accuracy of the equipment and survey. It needs a criterium to be stated.</i></p> <p>(4) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the excavation.</p> <p>(5) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling, compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground or Concealed Services.</p> <p><i>"Drains" is a correct and collective construction term for all types of surface water, waste or foul pipe drains that will be encountered frequently when</i></p>	<p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling, compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground or Concealed Services.</p> <p>(3) Take care to expose, support and protect any drains, other services (new or existing) which follow or cross the route of Underground or Concealed Services.</p> <p>(4) Reinstating surface paving with material and methods specified, paying attention not leave any difference in level with surrounding</p>
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<p>(4) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(5) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(6) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(7) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(8) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [<i>Spotters, Flagmen and the Like</i>] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(10) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(11) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(12) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <ol style="list-style-type: none"> (1) Location of live cables and equipment. (2) Risk of electric shock from live cables or equipment. (3) Separation distances from live cables and equipment. (4) Work procedure, (5) Preventive measures against electric shock, 	<p><i>excavating for other services. These drains will require such treatment if and when they are found and I do not recommend that it be deleted.</i></p> <p>(3) Take care to expose, support and protect any drains, other services (new or existing) which follow or cross the route of Underground or Concealed Services.</p> <p>(4) Reinstate surface paving with material and methods specified, paying attention not leave any difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(5) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(6) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(7) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(8) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(9) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(10) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [<i>Spotters, Flagmen and the Like</i>] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(11) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(12) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(13) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer. and to the relevant authority and/or third party as appropriate.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <ol style="list-style-type: none"> (1) Location of live cables and equipment. (2) Risk of electric shock from live cables or equipment. (3) Separation distances from live cables and equipment. 	<p>pavement and replace all surface markings and signage.</p> <p>(5) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(6) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(7) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(8) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(9) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(10) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [<i>Spotters, Flagmen and the Like</i>] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(11) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(12) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(13) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <ol style="list-style-type: none"> (1) Location of live cables and equipment. (2) Risk of electric shock from live cables or equipment. (3) Separation distances from live cables and equipment. (4) Work procedure. (5) Preventive measures against electric shock. (6) PPE to be used.
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<p>(6) PPE to be used.</p> <p>(7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5.</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p>	<p>(4) Work procedure.</p> <p>(5) Preventive measures against electric shock.</p> <p>(6) PPE to be used.</p> <p>(7) Electric shock accident in accordance with JSSS 3.1.5 エラー! 参照元が見つかりません。 [Electric Shock Treatment].</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.24 [Accident Response Plan] and JSSS 1.25.2 [Measures at the Time Accidents Occur].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p>	<p>(7) Electric shock accident in accordance with JSSS 3.1.5 エラー! 参照元が見つかりません。 [Electric Shock Treatment].</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.24 [Accident Response Plan] and JSSS 1.25.2 [Measures at the Time Accidents Occur].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p>
<p>3.1.5 Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [Accident Response Plan].</p>	<p>After further consideration, I feel that the following clause should be included here as this impact with existing services is likely to be needed here. I have therefore transferred here from Chapter 4:</p> <p>3.1.5 Electrical Shock Treatment</p> <p>The following measures shall be taken in the event of an electric shock accident.</p> <p>(1) Prohibit workers from touching the chassis or body of any Contractor's Equipment or materials that have become electrified by any live circuit and keep all Contractor's Personnel well away from such equipment, materials and the working area.</p> <p>(2) When the unit of Contractor's Equipment which is in contact with or in close proximity to a live circuit does not get an electrical shock, the operator shall immediately move the equipment to an adjacent safe location.</p> <p>(3) When it is not possible to move the Contractor's Equipment away, the operator shall remain in the cabin until the affected live circuits are de-energised.</p> <p>(4) Prevent secondary electric shock accident by permitting only those who have received training in electrical rescue to rescue the casualties of an electric shock accident.</p> <p>(5) Immediately perform primary lifesaving measures such as CPR, if necessary use an Automated External Defibrillator (AED) and call for emergency medical support.</p> <p>Report to the Engineer in accordance with JSSS 1.25.2 [Measures at the Time Accidents Occur] and where applicable to the representative of the relevant authority.</p>	<p>3.1.5 Electrical Shock Treatment</p> <p>The following measures shall be taken in the event of an electric shock accident.</p> <p>(1) Prohibit workers from touching the chassis or body of any Contractor's Equipment or materials that have become electrified by any live circuit and keep all Contractor's Personnel well away from such equipment, materials and the working area.</p> <p>(2) When the unit of Contractor's Equipment which is in contact with or in close proximity to a live circuit does not get an electrical shock, the operator shall immediately move the equipment to an adjacent safe location.</p> <p>(3) When it is not possible to move the Contractor's Equipment away, the operator shall remain in the cabin until the affected live circuits are de-energised.</p> <p>(4) Prevent secondary electric shock accident by permitting only those who have received training in electrical rescue to rescue the casualties of an electric shock accident.</p> <p>(5) Immediately perform primary lifesaving measures such as CPR, if necessary use an Automated External Defibrillator (AED) and call for emergency medical support.</p> <p>(6) Report to the Engineer in accordance with JSSS 1.25.2 [Measures at the Time Accidents Occur] and where applicable to the representative of the relevant authority.</p>
<p>3.2 OVERHEAD SERVICES</p> <p>3.2.1 General</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as "Overhead Services"), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of the Overhead Services which are the property of a third party, the Contractor shall take the procedure for the works mentioned in (4) below.</p>	<p>OVERHEAD SERVICES</p> <p>3.2.1. Generally</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as "Overhead Services"), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>Please refer to above notes, I suggest the addition of the following:</p>	<p>3.2 OVERHEAD SERVICES</p> <p>3.2.1 Generally</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as "Overhead Services"), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) If Overhead Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the relevant authority.</p>

<p>(4) In accordance with the agreement between the Employer and the owner of Overhead Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.</p> <p>(5) In the case of Overhead Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.2.2.</p> <p>3.2.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Overhead Services or the Employer, emergency call list and communication system;</p> <p>(2) Wherever necessary, the Contractor shall:</p> <p>(a) Consult with the owner of Overhead Services, give notice of work commencement, obtain further details of the location, content and condition of the Overhead Services, requirements and procedures of the owner of Overhead Services;</p> <p>(b) Obtain particular information from the owner of Overhead Services on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(c) Protect the Overhead Services in accordance with the Contract and the instructions of the owner of Overhead Services and the Engineer.</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>Unless otherwise specified in the Contract or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to mitigate future risk of injury, leakage or pollution.</p>	<p>(2) If Overhead Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the relevant authority.</p> <p><i>Please refer to above notes, I suggest the following is deleted:</i></p> <p>(3) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(4) In the case of the Overhead Services which are the property of a third party, the Contractor shall take the procedure for the works mentioned in (4) below.</p> <p>(5) In accordance with the agreement between the Employer and the owner of Overhead Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.</p> <p>(6) In the case of Overhead Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.2.2.</p> <p>3.2.2. Preparation and Work Planning</p> <p>(1) Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for protecting, diverting, removing, replacing or the like of any Overhead Services:</p> <p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon;</p> <p>(b) Prepare an emergency call list and communication procedure; and</p> <p>(c) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-energisation of the Overhead Services in case of an accident.</p> <p>(2) Where Overhead Services are the property of the Employer, the Contractor shall make necessary preparations as in 3.2.2. above and perform the work in connection with the Overhead Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>3.2.3. Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p>	<p>3.2.2 Preparation and Work Planning</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for protecting, diverting, removing, replacing or the like of any Overhead Services:</p> <p>(1) Prepare a detailed Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon;</p> <p>(2) Prepare an emergency call list and communication procedure; and</p> <p>(3) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-energisation of the Overhead Services in case of an accident.</p> <p>3.2.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or</p>
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(3) Be aware of and **avoid all risk** of electric shock when working near any cables or wires to ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.

(4) Be aware of and **mitigate risk** of subsidence or collapse of support structures of Overhead Services due to excavations or other being too close.

To MD, please review this comment and if same revision is necessary in the above (3).

(5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.

(6) Provide insulating protective pipe to the Overhead Services.

(7) Create **safe zones** free from danger arising from use of Contractor's Equipment by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers.

To MD: Is this "safe zones" to be replaced with "dangerous zones" in (7) and (8) because (8) specifies to prevent Equipment entering the safety zone?

(8) Prevent Contractor's Equipment, wire ropes or chains from **entering the safe zones** and limit the moving range of crane jibs and other high equipment.

(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.

(10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

(1) Protect and secure all Overhead Services throughout the **execution of the Works**.

(2) Adequately test all Underground or Concealed Services **at the time of** completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.

(3) Be aware of and avoid all risk of electric shock when working near any cables or wires, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.

Suggest that "remove all risk" (which is contractually correct) is clearer and more preferable to "mitigate risk". This needs to be absolute and clear, "mitigate" is neither:

(4) Be aware of and **avoid all risk** of subsidence or collapse of support structures of Overhead Services due to **excavations** being too close.

(5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.

Pipe and casings are different, I suggest both are correct

(6) Provide insulating protective pipe or casings to the Overhead Services.

(7) Create safe zones free from danger arising from the use Contractor's Equipment by demarcating the route and turning ranges and providing adequate signage and barriers.

(8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.

(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk of close proximity or contact with Overhead Services, Contractor's Personnel or the Works.

(10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the **relevant authority**:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage	1m

pollution.

(3) Be aware of and avoid all risk of electric shock when working near any cables or wires, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.

(4) Be aware of and avoid all risk of subsidence or collapse of support structures of Overhead Services due to excavations being too close.

(5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.

(6) Provide insulating protective pipe or casings to the Overhead Services.

(7) Create safe zones free from danger arising from the use Contractor's Equipment by demarcating the route and turning ranges and providing adequate signage and barriers.

(8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.

(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk of close proximity or contact with Overhead Services, Contractor's Personnel or the Works.

(10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the relevant authority:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

(11) Prepare as-built drawings of Overhead Services after completion of the associated work showing accurate positions, sizes, routes and details and submit to the Engineer.

<p>3.2.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following in addition to JSSS 3.1.4 (1) to (6):</p> <ol style="list-style-type: none"> (1) Accident training and response measures to an electric shock accident in accordance with JSSS 3.2.5. (2) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan]. (3) Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services. <p>MD: Please add or modify (3) to make clear "other"</p> <p>3.2.5 Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [Accident Response Plan].</p>	<p>(Less than 600V)</p> <p>Why delete? A record is necessary whether specified elsewhere or not.</p> <p>(11) Prepare as-built drawings of Overhead Services after completion of the associated work showing accurate positions, sizes, routes and details and submit to the Engineer.</p> <p>3.2.4. Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the items listed JSSS 3.1.4 (1) to (6) plus the following:</p> <ol style="list-style-type: none"> (1) Accident training and response measures to an electric shock accident in accordance with JSSS 4.1.8 [Electric Shock Treatment] (2) Response in the event of an accident in accordance with JSSS 1.24 [Accident Response Plan]. (3) Appropriate procedures in the case of accidents arising from contact with or damage to any Overhead Services. <p>3.2.5. Electrical Shock Treatment</p> <p>The Contractor shall take the measures prescribed in JSSS 3.1.5 [Electrical Shock Treatment].</p>	<p>3.2.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the items listed JSSS 3.1.4 (1) to (6) plus the following:</p> <ol style="list-style-type: none"> (1) Accident training and response measures to an electric shock accident in accordance with JSSS 4.1.8 [Electric Shock Treatment] (2) Response in the event of an accident in accordance with JSSS 1.24 [Accident Response Plan]. (3) Appropriate procedures in the case of accidents arising from contact with or damage to any Overhead Services. <p>3.2.5 Electrical Shock Treatment</p> <p>The Contractor shall take the measures prescribed in JSSS 3.1.5 [Electrical Shock Treatment].</p>
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JICA Standard Safety Specification Preparation Study
D1 英文経緯書 CHAPTER 3: UNDERGROUND AND OVERHEAD SERVICES

<p>JICA Comments on R2(2020/3/6) JC: JICA comments and revision in blue letters and underlined Red letters: last revision in R2 draft, NK: NK actions</p>	<p>JSSS in English R3 for Issue 3 (2020/3/13) Blue letters: JICA revised on the draft R2</p>	<p>JSSS in English Issue 3 (2020/3/22) With comments by MD</p>	<p>JSSS in English Issue 3 (2020/3/22) Clean Copy</p>
<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. General 3.1.2. Preparation and Work Planning 3.1.3. Requirements and Precautions 3.1.4. Information to Contractor's Personnel 3.1.5. Electrical Safety Training and Accident Measures</p> <p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General 3.2.2. Preparation and Work Planning 3.2.3. Requirements and Precautions for Charged Lines 3.2.4. Information to Contractor's Personnel 3.2.5. Electrical Safety Training and Accident Measures</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. General 3.1.2. Preparation and Work Planning 3.1.3. Requirements and Precautions 3.1.4. Information to Contractor's Personnel 3.1.5. Electrical Safety Training and Accident Measures</p> <p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General 3.2.2. Preparation and Work Planning 3.2.3. Requirements and Precautions for Charged Lines 3.2.4. Information to Contractor's Personnel 3.2.5. Electrical Safety Training and Accident Measures</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. Generally 3.1.2. Preparation and Work Planning 3.1.3. Requirements and Precautions 3.1.4. Information to Contractor's Personnel 3.1.5. Electrical Shock Treatment</p> <p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General 3.2.2. Preparation and Work Planning 3.2.3. Requirements and Precautions for Charged Lines 3.2.4. Information to Contractor's Personnel 3.2.5. Electrical Shock Treatment</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. Generally 3.1.2. Preparation and Work Planning 3.1.3. Requirements and Precautions 3.1.4. Information to Contractor's Personnel 3.1.5. Electrical Shock Treatment</p> <p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General 3.2.2. Preparation and Work Planning 3.2.3. Requirements and Precautions for Charged Lines 3.2.4. Information to Contractor's Personnel 3.2.5. Electrical Shock Treatment</p>
<p>JC: e-mail from Mr. Ito on 2020/3/6</p> <p>3章の Utility に関する4段表ですが、以下の点において、こちらからの要求事項を十分に満たしているものとは判断しかねます。</p> <p>① 4段表の右から2段目の経緯に残っている通り、当方のお願いは「ユーティリティの所有者別」で検討をすすめるのではなく、「ユーティリティが埋まっていることが分かっている場合とわかっていない場合」に分けて記述してください、というものです。</p> <p>「NK: As shown in 3.1.2 (2) (a) ~ (d) of this section in yellow are added as provide in Japanese draft. Item (2) is added for response to the JICA comments to specify two cases.」というような検討経緯がついていますが、結果としてこちらの要求する形に直っていません。(下記②も参照)</p> <p>② 例えば 3.1.2 の(2)と(3)が論理的な対比をなしていません。(2)は第三者がオーナーの場合、(3)は「ユーティリティが埋まっていることが分からない場合」です。そして(4)で一転再び発注者がオーナーの場合となっており、論理的に素直に流れていきません。</p> <p>英文がすでに Owner が誰かに着目した分類で記述されているので、その趣旨を殺さないように心がけながら修正してみました。これで今一度ご確認ください。</p> <p>今回は修正すべき事項が多いため、一番右の列だけ抜き出して、コメントを付しています。</p> <p>また、先般打ちあわせ通り、数か月後にまとまった形になったところで、全体を鳥瞰する形での内容確認をさせて頂きたいと考えているので、その際は今回コメントの対象としなかった部分についても、コメントする可能性がある点を含みおいてください。</p>			

<p>JC: e-mail from Mr. Ito on 2020/3/6</p> <p>We cannot judge that our requests are fully reflected in the last draft R2 regarding the following points:</p> <p>① Our requests are not to improve the description for different owners of underground utilities but to specifies for two cases of utilities which existence is known and not known.</p> <p>NK responded to our comments as “NK: As shown in 3.1.2 (2) (a) ~ (d) of this section in yellow are added as provide in Japanese draft. Item (2) is added for response to the JICA comments to specify two cases.”. However, as thee results, these do not meet our requests.</p> <p>② For example, (2) and (3) in 3.1.2 are not logically contrast. (2) is for the case of the utility which owner is a third party. (3) is for the case of underground utility which existing is not known. Then (4) is for the case of utility which owner is the Employer. These do not logically flow.</p> <p>We modified the draft paying attention not to change the original intention as the original was prepared on the basis of different owners. Please review them.</p> <p>As there are many revisions required, the draft R2 are copied to other sheets and added our comments on them.</p> <p>Please keep in your mind, we are planning to review (bird's eye view) whole document of JSSS which will be submitted us after several months as discussed last time and there is a possibility we will give more comments to items to which we have not commented this time.</p>			
<p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 General</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), and which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third party (called as “the owner of Underground or Concealed Services”), the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p> <p>JC: 単に third party でよいと思います。 JC think it is better to simply “third part”.</p> <p>JC: この後、owner が発注者であろうが、第三者であろうが</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 General</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”) which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of Underground or Concealed Services which are the property of a third party, the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p> <p>(4) In accordance with the agreement between the Employer and the owner of Underground or</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 Generally</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p><i>I have added the following as in any event it should apply; compliance with such procedures is usually mandatory and non-compliance will impact upon safety:</i></p> <p>(2) If Underground or Concealed Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the authority.</p> <p><i>Reference now included in the User Guide;</i></p> <p>(3) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 Generally</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p>(2) If Underground or Concealed Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the authority.</p>

<p>ownerという言葉で理解できるように記述するために削除します。 After this, the sentence is deleted to specify owner is any of the Employer and third party.</p> <p>NK: modified as commented.</p> <p>(4) In accordance with the legally binding agreement between the Employer and the owner of Underground or Concealed Services obtained by the Employer regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission of the owner of Underground or Concealed Services to execute the work according to following the preparations described in JSSS 3.1.2 as well as the requirements of the Contract and the instruction of the Engineer.</p> <p>JC: コントラクターにとっては結果が大事(障害なく着工できることが大事)であり、発注者と Utility オーナーとの関係が legally binding か否かは関係ありません。</p> <p>For the Contractor, it is important that they can commence the Works without any obstacle. It is not matter whether the relation between the Employer and the owner of utility is bounded legally or not.</p> <p>JC: 全体として、発注者・エンジニアの支援の下、3. 1.2 の準備作業を行い、オーナーからの工事許可を得る、という流れになります。</p> <p>The flow of activity of the Contractor is 1) preparation work mentioned in 3.1.2 with assistance of the Employer and the Engineer, and 2) obtaining permission of works from the owner.</p> <p>NK: modified as commented.</p> <p>(5) In the case of Underground or Concealed Services which are the property of the Employer, the Contractor shall take the necessary procedure for the work in accordance with the Contract. the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.</p> <p>JC: (4)と(5)が論理的な対比になっていません。(4)はオーナーによる permission を論じているのに対し、(5)は「契約に従って行うこと」になっています。「オーナーによる permission を取得すること」に着目した対比であるべきです。発注者がオーナーである場合、当然かかる permission は所与のものであるべきものです。</p> <p>(4) and (5) are not logically contrast. (4) is described permission of the owner, however (5) is “in accordance with the Contract”. (5) shall be specified focusing “to get</p>	<p>Concealed Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission to execute the work following the preparations described in JSSS 3.1.2 as well as the requirements of the Contract and the instruction of the Engineer.</p> <p>(5) In the case of Underground or Concealed Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.</p>	<p>Specification and take measures specified in this Chapter.</p> <p>(4) In the case of Underground or Concealed Services which are the property of a third party, the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p> <p><i>As commented before and explained in January, why is all of this text relating to property ownership, permissions and contact with utility companies necessary, when it has nothing to do with safety and it is not always correct?</i></p> <p><i>Very often (if not usually) for JICA funded drainage and sewage treatment improvement projects, the executing agency is also the owner and operator of the underground and overhead utility services. In such cases the Employer and relevant authority are often one and the same and in this common case, the contact arrangements, requirements for permissions etc. stipulated in the JICA draft, do not apply.</i></p> <p><i>Sometimes also for example specialist local subcontractors who are already registered with the utility authority or company are required to be used. Actual arrangements can be very different.</i></p> <p><i>It is unusual and potentially risky to assume that the JICA specified arrangements apply as a common basis on all projects when they don't and I recommend that all is omitted.</i></p> <p><i>I am aware that sometimes the employer may require the contractor to make improper arrangements and but this is not the norm and also sometimes also the contractor does not perform correctly. However, I understood that JSSS is a safety specification, not a contract procedural manual and I suggest that it should not be used for this latter purpose.</i></p> <p><i>The following paragraph for example, is contractually and practically incorrect, the contractor has no obligation to get permission to execute the works, why should he?? If this is stated there is a strong likelihood that it will negatively affect the quality of the Bid Documents. Also, if the authority doesn't give such permission or delays in giving it, or changes the scope or working methods and timing the consequences are greatly confused. The other aspects of this clause are not relevant to safety and JSSS and have no real meaning.</i></p> <p><i>The scope and requirements for all work should be investigated and clarified beforehand by the executing agency and consultant and properly specified by the Employer in the Bidding documents before requesting Bids.</i></p> <p>(5) In accordance with the agreement between the Employer and the owner of Underground or Concealed Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and</p>	
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<p>permission of the owner” as contrast of (4). In case that the owner is the Employer, the permission shall be already given.</p> <p>NK: modified as commented.</p> <p>3.1.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(6) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system; In case the details of Underground or Concealed Services (position, depth, route and specifications for relocation/protection, etc.), the Contractor shall carry out the following preparatory work prior to the commencement of the work:</p> <p>(2) In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third:</p> <p>(a) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system;</p> <p>JC: 以下、ownerという言葉が出てきますが、これは発注者であろうが、第三者であろうが区別する必要はないと思います。</p> <p>JC considers it is not necessary to distinguish the Employer or the third party as the owner after this.</p> <p>NK: modified as commented.</p> <p>(b) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner of Underground or Concealed Services, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, of for the required works, requirements and procedures of the owner of Underground or Concealed Services;</p> <p>JC: 3.1.1 で発注者の reasonable assistance に言及しているので不要。またこれを消すことで、owner が発注者であろうが、第三者であろうが、意味が通じる文章になります。</p>	<p>3.1.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) In case the details of Underground or Concealed Services (position, depth, route and specifications for relocation/protection, etc.), the Contractor shall carry out the following preparatory work prior to the commencement of the work:</p> <p>(n) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system;</p> <p>(o) The Contractor may consult with the owner of Underground or Concealed Services, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, requirements and procedures of the owner of Underground or Concealed Services;</p> <p>(p) Obtain particular information from the owner of Underground or Concealed Services on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and</p>	<p>Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission to execute the work following the preparations described in JSSS 3.1.2 as well as the requirements of the Contract and the instruction of the Engineer.</p> <p><i>If JSSS includes (unnecessary) requirements for permissions and contact with Utility Companies as above then it also requires to state where such requirements are not necessary i.e. where the services are owned by the employer, which was why I changed the earlier draft so it was more balanced.</i></p> <p><i>However, if the former isn't required then neither is the latter.</i></p> <p><i>With the benefit of more time to consider this and as also suggested by Ito san in our meeting in January to explore ways to simplify this Chapter, I strongly recommend that this Chapter should be changed:</i></p> <p>1) <i>To concentrate on safety matters only.</i></p> <p>2) <i>To delete any ownership, permissions, contact arrangements and</i></p> <p>3) <i>To include clear requirements for the Employer to carry out proper pre-bid studies and prepare precise bid documentation and that this shall be included in the User Guide.</i></p> <p><i>I have edited this Chapter and will edit the User Guide on this basis.</i></p> <p>(6) In the case of Underground or Concealed Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.</p> <p>3.1.2 Preparation and Work Planning</p> <p>(1) Where Underground or Concealed Services are the property of a relevant authority or a third party and the Contractor is required under the Contract to perform work thereon or to locate and protect same. Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for locating, protecting, diverting, removing, replacing or the like of any Underground or Concealed Services:</p> <p><i>The following added paragraph in your draft is an unnecessary duplication of the above:</i></p> <p>(2) In case the details of Underground or Concealed Services (position, depth, route and specifications for relocation/protection, etc.), the Contractor shall carry out the following preparatory work prior to the commencement of</p>	<p>3.1.2 Preparation and Work Planning</p> <p>(1) Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for locating, protecting, diverting, removing, replacing or the like of any Underground or Concealed Services:</p> <p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon;</p> <p>(b) Prepare an emergency call list and communication procedure;</p> <p>(c) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident;</p> <p>(d) Provide and use cable avoidance tools or cable locators, trace the position and routes on ground surfaces, walls and floors of all Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area;</p> <p>Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed Services and proceed to expose and protect same or prepare for the required work; and</p> <p>(e) The Method Statement shall be revised based on the information obtained from the above locating and exploratory work</p> <p>(2) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed</p>
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<p>It is not necessary as 3.1.1 has described “reasonable assistance”. By deleting this sentence, (b) becomes to specify for both owners (the Employer and the third party).</p> <p>JC: これはいらぬような気がします。「工事を”するために必要な地下埋設物」というように読めるような気がするからです。ここで論じているのは、保護をかけるような必要がある地下埋設物</p> <p>“of the required works” seems not necessary because JC think it may be read as “Underground Services required for the Works”. (b) specifies about Underground Services to be protected.</p> <p>NK: modified as commented.</p> <p>(c) Obtain particular information from the owner of Underground or Concealed Services on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and</p> <p>(d) Provide and use cable avoidance tools such as Cable Locator, and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>(e) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner of Underground or Concealed Services and the Engineer.</p> <p>(f) The Method Statement shall be revised based on the information obtained from the owner of Underground or Concealed Services and the exploratory hand excavation.</p> <p>(7) In the case of Underground or Concealed Services which existence are predicted at the Site by the Contractor, but details are not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>JC: このスペックは入札書類に含まれる文書なので、ここに「コントラクターによって予見される」というのは不適切です。</p> <p>As the JSSS is included in bid documents, it is not proper to mention “existence is predicted at the Site by the Contractor”.</p> <p>NK: modified as commented.</p>	<p>(q) Provide and use cable avoidance tools such as Cable Locator, and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>(r) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner of Underground or Concealed Services and the Engineer.</p> <p>(s) The Method Statement shall be revised based on the information obtained from the owner of Underground or Concealed Services and the exploratory hand excavation.</p> <p>(2) In case Underground or Concealed Services of which existence are predicted at the Site, but details are not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation,</p> <p>(t) Consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(u) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p>(3) Machine excavation shall not be allowed when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the work.</p> <p>(4) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor’s Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p>	<p>the work.</p> <p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon;</p> <p>(b) Prepare an emergency call list and communication procedure;</p> <p>(c) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner’s representative of the relevant authority or third party, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, of the required works, requirements and procedures of the owner.</p> <p>(d) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident;</p> <p>(e) Provide and use cable avoidance tools or cable locators, trace the position and routes on ground surfaces, walls and floors of all Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed Services and proceed to expose and protect same or prepare for the required work; and in accordance with the Contract and the instructions of the owner’s representative of the relevant authority or third party and the Engineer.</p> <p>(f) The Method Statement shall be revised based on the information obtained from the above locating and exploratory work</p> <p><i>The following is not connected with safety and I do not recommend that it is included, none of this is related to safety matters which are not covered by the above. It will create misunderstanding and potential conflict, for example - what is the meaning of “existence is predicted but no detail given”? What is a “proposal” in a contract sense, “Variation”? Why such engineer’s input?</i></p>	<p>Services may exist in the location or vicinity of the excavation.</p> <p>(3) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor’s Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p>
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<p>(g) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services and submit it to the Engineer.</p> <p>(h) Following the instruction by the Engineer regarding the proposal, create Method Statement showing the type, the owner of Underground or Concealed Services and location of assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation,</p> <p>(i) (Accompanied by a representative of the Employer and Engineer) consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(j) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p>(3) Where Underground or Concealed Services are the property of the Employer, the Contractor shall make relevant preparations as in JSSS 0 (2) and (3) and perform the work in connection with the Underground or Concealed Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>JC: as commented, not necessary to separately specify (3) for the Employer's property.. JC: deleted.</p> <p>(8) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the work.</p> <p>JC: 今までも議論があったと思いますが、一律2メートルの範囲で禁止というのはやりすぎです。 It is excessive to specify not to be allowed within 2m for all cases as already discussed</p> <p>NK: modified as commented.</p> <p>(9) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Contract, or</p>	<p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Contract, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground.</p> <p>(3) Restore surface paving with material and methods specified, paying attention not leaving difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(4) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(5) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p>	<p>(3) In case Underground or Concealed Services of which existence are predicted at the Site, but details are not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services and submit it to the Engineer.</p> <p>(b) Following the instruction by the Engineer regarding the proposal, create Method Statement showing the type, the owner of Underground or Concealed Services and location of assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation.</p> <p>(c) Consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(d) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p><i>Why is the following changed? No machine excavation should start until locations and routes are explored and indicated as above and then precautions should be taken due to the accuracy of the equipment and survey. It needs a criterium to be stated.</i></p> <p>(4) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the excavation.</p> <p>(5) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling, compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using</p>	<p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling, compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground or Concealed Services.</p> <p>(3) Take care to expose, support and protect any drains, other services (new or existing) which follow or cross the route of Underground or Concealed Services.</p> <p>(4) Reinstating surface paving with material and methods specified, paying attention not leave any difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(5) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(6) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(7) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(8) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(9) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(10) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters,</p>
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<p>instructed by the Engineer, the Contractor shall:</p> <p>(10) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces.</p> <p>(11) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground.</p> <p>(12) Restore surface paving with material and methods specified, paying attention not leaving difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(13) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(14) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(15) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(16) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(17) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(18) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(19) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(20) Provide permanent markers or signage at the surface to warn of the presence, route and any</p>	<p>(6) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(7) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(8) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(10) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(11) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(12) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(1) Location of live cables and equipment.</p> <p>(2) Risk of electric shock from live cables or equipment.</p> <p>(3) Separation distances from live cables and equipment.</p>	<p>power tools for example asphalt cutting machine to break through paved surfaces above Underground or Concealed Services.</p> <p>"Drains" is a correct and collective construction term for all types of surface water, waste or foul pipe drains that will be encountered frequently when excavating for other services. These drains will require such treatment if and when they are found and I do not recommend that it be deleted.</p> <p>(3) Take care to expose, support and protect any drains, other services (new or existing) which follow or cross the route of Underground or Concealed Services.</p> <p>(4) Reinstatement surface paving with material and methods specified, paying attention not leave any difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(5) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(6) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(7) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(8) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(9) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(10) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(11) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future</p>	<p>Flagmen and the Like] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(11) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(12) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(13) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(1) Location of live cables and equipment.</p> <p>(2) Risk of electric shock from live cables or equipment.</p> <p>(3) Separation distances from live cables and equipment.</p> <p>(4) Work procedure.</p> <p>(5) Preventive measures against electric shock.</p> <p>(6) PPE to be used.</p> <p>(7) Electric shock accident in accordance with JSSS 3.1.5 エラー! 参照元が見つかりません。 [Electric Shock Treatment].</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.24 [Accident Response Plan] and JSSS 1.25.2 [Measures at the Time Accidents Occur].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p>
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<p>danger of any Underground or Concealed Services.</p> <p>(21) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(22) Location of live cables and equipment.</p> <p>(23) Risk of electric shock from live cables or equipment.</p> <p>(24) Separation distances from live cables and equipment.</p> <p>(25) Work procedure,</p> <p>(26) Preventive measures against electric shock,</p> <p>(27) PPE to be used.</p> <p>(28) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5.</p> <p>(29) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan].</p> <p>(30) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p> <p>3.1.5 Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [Accident Response Plan].</p>	<p>(4) Work procedure,</p> <p>(5) Preventive measures against electric shock,</p> <p>(6) PPE to be used.</p> <p>(7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5.</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p> <p>3.1.5 Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [Accident Response Plan].</p>	<p>mechanical damage to same.</p> <p>(12) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(13) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer. and to the relevant authority and/or third party as appropriate.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(1) Location of live cables and equipment.</p> <p>(2) Risk of electric shock from live cables or equipment.</p> <p>(3) Separation distances from live cables and equipment.</p> <p>(4) Work procedure.</p> <p>(5) Preventive measures against electric shock.</p> <p>(6) PPE to be used.</p> <p>(7) Electric shock accident in accordance with JSSS 3.1.5 エラー! 参照元が見つかりません。 [Electric Shock Treatment].</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.24 [Accident Response Plan] and JSSS 1.25.2 [Measures at the Time Accidents Occur].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p> <p><i>After further consideration, I feel that the following clause should be included here as this impact with existing services is likely to be needed here. I have therefore transferred here from Chapter 4:</i></p> <p>3.1.5 Electrical Shock Treatment</p> <p>The following measures shall be taken in the event of an electric shock accident.</p> <p>(1) Prohibit workers from touching the chassis or body of any Contractor's Equipment or materials that have become electrified by any live circuit and keep all Contractor's Personnel well away from such equipment, materials and the working area.</p>	<p>3.1.5 Electrical Shock Treatment</p> <p>The following measures shall be taken in the event of an electric shock accident.</p> <p>(1) Prohibit workers from touching the chassis or body of any Contractor's Equipment or materials that have become electrified by any live circuit and keep all Contractor's Personnel well away from such equipment, materials and the working area.</p> <p>(2) When the unit of Contractor's Equipment which is in contact with or in close proximity to a live circuit does not get an electrical shock, the operator shall immediately move the equipment to an adjacent safe location.</p> <p>(3) When it is not possible to move the Contractor's Equipment away, the operator shall remain in the cabin until the affected live circuits are de-energised.</p> <p>(4) Prevent secondary electric shock accident by permitting only those who have received training in electrical rescue to rescue the casualties of an electric shock accident.</p> <p>(5) Immediately perform primary lifesaving measures such as CPR, if necessary use an Automated External Defibrillator (AED) and call for emergency medical support.</p> <p>(6) Report to the Engineer in accordance with JSSS 1.25.2 [Measures at the Time Accidents Occur] and where applicable to the representative of the relevant authority.</p>
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3.2. OVERHEAD SERVICES

3.2.1. General

- (31) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.
- (32) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.
- (33) In the case of the Overhead Services which are the property of a ~~legally constituted public authority or a third party (called as “the owner of Overhead Services”)~~, the Contractor shall take the procedure for the works mentioned in (4) below.
- (34) In accordance with the ~~legally binding~~ agreement between the Employer and the owner of Overhead Services ~~obtained by the Employer~~ regarding the actual scope of work to be carried out, ~~permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures)~~, the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works ~~according to following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.~~

JC: (3)~(5)については地下埋設と同様になるように修正。

3.2 OVERHEAD SERVICES

3.2.1 General

- (10) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.
- (11) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.
- (12) In the case of the Overhead Services which are the property of a third party, the Contractor shall take the procedure for the works mentioned in (4) below.
- (13) In accordance with the agreement between the Employer and the owner of Overhead Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.
- (14) In the case of Overhead Services which are the property of the Employer, the permission

- (2) When the unit of Contractor’s Equipment which is in contact with or in close proximity to a live circuit does not get an electrical shock, the operator shall immediately move the equipment to a adjacent safe location.
- (3) When it is not possible to move the Contractor’s Equipment away, the operator shall remain in the cabin until the affected live circuits are de-energised.
- (4) Prevent secondary electric shock accident by permitting only those who have received training in electrical rescue to rescue the casualties of an electric shock accident.
- (5) Immediately perform primary lifesaving measures such as CPR, if necessary use an Automated External Defibrillator (AED) and call for emergency medical support.

Report to the Engineer in accordance with JSSS 1.25.2 [Measures at the Time Accidents Occur] and where applicable to the representative of the relevant authority

3.2 OVERHEAD SERVICES

3.2.1. Generally

- (1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.

Please refer to above notes, I suggest the addition of the following:

- (2) If Overhead Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the relevant authority.

Please refer to above notes, I suggest the following is deleted:

- (3) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.
- (4) In the case of the Overhead Services which are the property of a third party, the Contractor shall take the procedure for the works mentioned in (4) below.
- (5) In accordance with the agreement between the Employer and the owner of Overhead Services

3.2 OVERHEAD SERVICES

3.2.1 Generally

- (1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.
- (2) If Overhead Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the relevant authority.

<p>(3) to (4) are modified and (5) is added to be similar to 3.1.1. NK: modified as commented.</p> <p>3.2.2. Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(35) Prepare a Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Overhead Services or the Employer, emergency call list and communication system;</p> <p>(36) In the case of Overhead Services which are the property of the owner of Overhead</p> <p>(k) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner of Overhead Services, give notice of work commencement, obtain further details of the location, content and condition of the Overhead Services for the required works, requirements and procedures of the owner of Overhead Services;</p> <p>JC: これはいらないような気がします。「工事をするために必要な電源」というように読めるような気がするからです。ここで論じているのは、保護をかけるような必要がある電線</p> <p>“for the required works” seems not necessary because JC think it may be read as “Overhead Services required for the Works”. (b) specifies about Overhead Services to be protected.</p> <p>NK: deleted as commented.</p> <p>(l) Obtain particular information from the owner of Overhead Services on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(m) Protect the Overhead Services in accordance with the Contract and the instructions of the owner of Overhead Services and the Engineer.</p> <p>(37) Where Overhead Services are the property of the Employer, the Contractor shall make necessary preparations as in 3.2.2 (2) and perform the work in connection with the Overhead Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>JC: as commented, not necessary to separately specify (3) for the Employer's property. NK: deleted.</p>	<p>mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.2.2.</p> <p>3.2.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Overhead Services or the Employer, emergency call list and communication system;</p> <p>(2) Wherever necessary, the Contractor shall:</p> <p>(a) Consult with the owner of Overhead Services, give notice of work commencement, obtain further details of the location, content and condition of the Overhead Services, requirements and procedures of the owner of Overhead Services;</p> <p>(b) Obtain particular information from the owner of Overhead Services on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(c) Protect the Overhead Services in accordance with the Contract and the instructions of the owner of Overhead Services and the Engineer.</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>Unless otherwise specified in the Contract or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to mitigate future risk of injury, leakage or pollution.</p>	<p>regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.</p> <p>(6) In the case of Overhead Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.2.2.</p> <p>3.2.2. Preparation and Work Planning</p> <p>(1) Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for protecting, diverting, removing, replacing or the like of any Overhead Services:</p> <p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon;</p> <p>(b) Prepare an emergency call list and communication procedure; and</p> <p>(c) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-energisation of the Overhead Services in case of an accident.</p> <p>(2) Where Overhead Services are the property of the Employer, the Contractor shall make necessary preparations as in 3.2.2. above and perform the work in connection with the Overhead Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>3.2.3. Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to</p>	<p>3.2.2 Preparation and Work Planning</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for protecting, diverting, removing, replacing or the like of any Overhead Services:</p> <p>(1) Prepare a detailed Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon;</p> <p>(2) Prepare an emergency call list and communication procedure; and</p> <p>(3) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-energisation of the Overhead Services in case of an accident.</p> <p>3.2.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(3) Be aware of and avoid all risk of electric shock when working near any cables or wires, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(4) Be aware of and avoid all risk of subsidence or collapse of support structures of Overhead</p>
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3.2.3 Requirements and Precautions for Charged Lines

Unless otherwise specified in the Contract **Bidding Documents**, or instructed by the Engineer, the Contractor shall:

- (38) Protect and secure all Overhead Services throughout the execution of the Works.
- (39) Adequately After the test of Overhead Services after at the completion of any diversion, replacement or alteration work by the owner of Overhead Services or the Employer, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution. Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to mitigate future risk of injury, leakage or pollution.

JC: modified.
NK: modified as commented.

- (40) Be aware of and **avoid all risk** of electric shock when working near any cables or wires to ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.
- (41) Be aware of and **avoid all** mitigate risk of subsidence or collapse of support structures of Overhead Services due to excavations or other being too close.

JC: avoid all risk は不可能。ここだけでなく、他の章でも出てきている可能性があると思われるので以後注意して下さい。

It is impossible to avoid all risk. Please pay attention to this, which may be specified in other clauses.

NK: modified as commented.

- (42) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.
- (43) Provide insulating protective pipe to the Overhead Services.
- (44) Create safe zones by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers and prohibit entry outside entering these ranges.

JC: このようにした方が、(7)と(8)のつながりが良いと思います。すなわち、(7)では safe zone の設定、(8)ではその safe zone に侵入させないように機械を使用する、という流れになります。

This revised description is smooth connection between (7) and (8) as (7) specifies to create safe zone and (8) does to operate machinery without entering in the safe zone.

NK: modified as commented.

- (45) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the

- (3) Be aware of and **avoid all risk** of electric shock when working near any cables or wires to ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.
- (4) Be aware of and **mitigate risk** of subsidence or collapse of support structures of Overhead Services due to excavations or other being too close.

To MD, please review this comment and if same revision is necessary in the above (3).

- (5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.
- (6) Provide insulating protective pipe to the Overhead Services.
- (7) Create **safe zones** free from danger arising from use of Contractor's Equipment by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers.

To MD: Is this "safe zones" to be replaced with "dangerous zones" in (7) and (8) because (8) specifies to prevent Equipment entering the safety zone?

- (8) Prevent Contractor's Equipment, wire ropes or chains from **entering the safe zones** and limit the moving range of crane jibs and other high equipment.
- (9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.

- (10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage	1m

ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.

- (3) Be aware of and avoid all risk of electric shock when working near any cables or wires, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.

Suggest that "remove all risk" (which is contractually correct) is clearer and more preferable to "mitigate risk". This needs to be absolute and clear, "mitigate" is neither:

- (4) Be aware of and **avoid all risk** of subsidence or collapse of support structures of Overhead Services due to **excavations** being too close.
- (5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.

Pipe and casings are different, I suggest both are correct

- (6) Provide insulating protective pipe or casings to the Overhead Services.
- (7) Create safe zones free from danger arising from the use Contractor's Equipment by demarcating the route and turning ranges and providing adequate signage and barriers.
- (8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.
- (9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk of close proximity or contact with Overhead Services, Contractor's Personnel or the Works.

- (10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the **relevant authority**:

Table 3.2.1: Safe Separation Distances

Circuit Voltage	Separation Distance
Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
High Voltage (600V up to 7000V)	1.2m
Low Voltage	1m

Services due to excavations being too close.

- (5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.
- (6) Provide insulating protective pipe or casings to the Overhead Services.
- (7) Create safe zones free from danger arising from the use Contractor's Equipment by demarcating the route and turning ranges and providing adequate signage and barriers.
- (8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.
- (9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk of close proximity or contact with Overhead Services, Contractor's Personnel or the Works.
- (10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the relevant authority:

Table 3.2.1: Safe Separation Distances

Circuit Voltage	Separation Distance
Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
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Low Voltage (less than 600V)	1m

- (11) Prepare as-built drawings of Overhead Services after completion of the associated work showing accurate positions, sizes, routes and details and submit to the Engineer.

<p>moving range of crane jibs and other high equipment.</p> <p>(46) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.</p> <p>(47) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:</p>	<p>(Less than 600V)</p>	<p>High Voltage</p>	<p>2 (600V up to 7000V)</p>	<p>1.2m</p>	<p>3.2.4 Information to Contractor's Personnel</p>												
<p>Table 3.2.1: Safe Separation Distances</p> <table border="1"> <thead> <tr> <th></th> <th>Circuit Voltage</th> <th>Separation Distance</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Extra-high Voltage (7000V and above)</td> <td>2m (20cm to be added for every 10,000V increase and fraction from 60,000V)</td> </tr> <tr> <td>2</td> <td>High Voltage (600V up to 7000V)</td> <td>1.2m</td> </tr> <tr> <td>3</td> <td>Low Voltage (Less than 600V)</td> <td>1m</td> </tr> </tbody> </table>		Circuit Voltage	Separation Distance	1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)	2	High Voltage (600V up to 7000V)	1.2m	3	Low Voltage (Less than 600V)	1m	<p>3.2.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following in addition to JSSS 3.1.4 (1) to (6):</p> <ol style="list-style-type: none"> (1) Accident training and response measures to an electric shock accident in accordance with JSSS 3.2.5. (2) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan]. (3) Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services. <p>MD: Please add or modify (3) to make clear "other".</p> <p>3.2.5 Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [Accident Response Plan].</p>	<p>Low Voltage (Less than 600V)</p>	<p>3 (Less than 600V)</p>	<p>1m</p>	<p>3.2.4 Information to Contractor's Personnel</p> <p>Why delete? A record is necessary whether specified elsewhere or not.</p> <p>(11) Prepare as-built drawings of Overhead Services after completion of the associated work showing accurate positions, sizes, routes and details and submit to the Engineer.</p> <p>3.2.4. Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the items listed JSSS 3.1.4 (1) to (6) plus the following:</p> <ol style="list-style-type: none"> (1) Accident training and response measures to an electric shock accident in accordance with JSSS 4.1.8 [Electric Shock Treatment] (2) Response in the event of an accident in accordance with JSSS 1.24 [Accident Response Plan]. (3) Appropriate procedures in the case of accidents arising from contact with or damage to any Overhead Services. <p>3.2.5. Electrical Shock Treatment</p> <p>The Contractor shall take the measures prescribed in JSSS 3.1.5 [Electrical Shock Treatment].</p>
	Circuit Voltage	Separation Distance															
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)															
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<p>3.2.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following in addition to JSSS 3.1.4 (1) to (6):</p> <p>(48) Accident training and response measures to an electric shock accident in accordance with JSSS 3.2.5.</p> <p>JC: 3.2.5 に飛んで、3.2.5 では再び 1.21 に飛んでいますが、従来までの検討では Accident Response Plan の原案は特別チームを編成せよ、といった内容に鑑み、大ナタを振っているはず。1.21 がどのような内容になるのかが確認できない現状ではコメントできません。全体が提出された際に改めて検討します。</p> <p>(1) specifies to refer to 3.2.5 and 3.2.5 does 1.2.1. In the last review, Accident Response Plan is requested to be drastically modified as last draft specified to establish special team. Because the content of revised 1.21 cannot be confirmed, JICA cannot comment now. After all JSSS is submitted, JICA will review this again.</p> <p>NK: It leaves as it is tentatively.</p>					<p>3.2.5 Electrical Shock Treatment</p> <p>The Contractor shall take the measures prescribed in JSSS 3.1.5 [Electrical Shock Treatment].</p>												

<p>(49)Response in the event of an accident in accordance with JSSS 1.20 [<i>Accident Response Plan</i>].</p> <p>(50)Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services.</p> <p>JC: May we know why this specifies “other”?</p> <p>NK: ask to MD about this.</p> <p>3.2.5. Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [<i>Accident Response Plan</i>].</p> <p>JC: 上記 3.2.4 に対するコメント参照. Please refer to the comment to above (1).</p> <p>NK: It leaves as it is tentatively.</p>			
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JICA Standard Safety Specification Preparation Study
D2 英文経緯書 CHAPTER 3: UNDERGROUND AND OVERHEAD SERVICES

2020.6.18 for Issue 4 & Clean Copy

<p>JICA Comments on R2(2020/3/6) JC: JICA comments and revision in blue letters and underlined Red letters: last revision in R2 draft, NK: NK actions</p>	<p>JSSS in English R3 for Issue 3 (2020/3/13) Blue letters: JICA revised on the draft R2</p>	<p>JSSS in English Issue 3 (2020/3/22) With comments by MD and NK</p>	<p>JSSS in English for Issue 4 (2020/6/18) based on Issue 3 Clean Copy (2020/3/22) and NK Revision</p>
<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. General 3.1.2. Preparation and Work Planning 3.1.3. Requirements and Precautions 3.1.4. Information to Contractor's Personnel 3.1.5. Electrical Safety Training and Accident Measures</p> <p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General 3.2.2. Preparation and Work Planning 3.2.3. Requirements and Precautions for Charged Lines 3.2.4. Information to Contractor's Personnel 3.2.5. Electrical Safety Training and Accident Measures</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. General 3.1.2. Preparation and Work Planning 3.1.3. Requirements and Precautions 3.1.4. Information to Contractor's Personnel 3.1.5. Electrical Safety Training and Accident Measures</p> <p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General 3.2.2. Preparation and Work Planning 3.2.3. Requirements and Precautions for Charged Lines 3.2.4. Information to Contractor's Personnel 3.2.5. Electrical Safety Training and Accident Measures</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. Generally 3.1.2. Preparation and Work Planning 3.1.3. Requirements and Precautions 3.1.4. Information to Contractor's Personnel 3.1.5. Electrical Shock Treatment</p> <p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General 3.2.2. Preparation and Work Planning 3.2.3. Requirements and Precautions for Charged Lines 3.2.4. Information to Contractor's Personnel 3.2.5. Electrical Shock Treatment</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1. UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1. Generally 3.1.2. Preparation and Work Planning 3.1.3. Requirements and Precautions 3.1.4. Information to Contractor's Personnel 3.1.5. Electrical Shock Treatment</p> <p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General 3.2.2. Preparation and Work Planning 3.2.3. Requirements and Precautions for Charged Lines 3.2.4. Information to Contractor's Personnel 3.2.5. Electrical Shock Treatment</p>
<p>JC: e-mail from Mr. Ito on 2020/3/6</p> <p>3章の Utility に関する4段表ですが、以下の点において、こちらからの要求事項を十分に満たしているものとは判断しかねます。</p> <p>① 4段表の右から2段目の経緯に残っている通り、当方のお願いは「ユーティリティの所有者別」で検討をすすめるのではなく、「ユーティリティが埋まっていることが分かっている場合とわかっていない場合」に分けて記述してください、というものです。</p> <p>「NK: As shown in 3.1.2 (2) (a) ~ (d) of this section in yellow are added as provide in Japanese draft. Item (2) is added for response to the JICA comments to specify two cases.」というような検討経緯がついていますが、結果としてこちらの要求する形に直っていません。(下記②も参照)</p> <p>② 例えば 3.1.2 の(2)と(3)が論理的な対比をなしていません。(2)は第三者がオーナーの場合、(3)は「ユーティリティが埋まっていることが分からない場合」です。そして(4)で一転再び発注者がオーナーの場合となっており、論理的に素直に流れていきません。</p> <p>英文がすでに Owner が誰かに着目した分類で記述されているので、その趣旨を殺さないように心がけながら修正してみました。これで今一度ご確認ください。</p> <p>今回は修正すべき事項が多いため、一番右の列だけ抜き出して、コメントを付しています。</p> <p>また、先般打ちあわせ通り、数か月後にまとまった形になったところで、全体を鳥瞰する形での内容確認をさせて頂きたいと考えているので、その際は今回コメントの対象としなかった部分についても、コメントする可能性がある点を含みおいてください。</p>			

<p>JC: e-mail from Mr. Ito on 2020/3/6</p> <p>We cannot judge that our requests are fully reflected in the last draft R2 regarding the following points:</p> <p>① Our requests are not to improve the description for different owners of underground utilities but to specifies for two cases of utilities which existence is known and not known.</p> <p>NK responded to our comments as “NK: As shown in 3.1.2 (2) (a) ~ (d) of this section in yellow are added as provide in Japanese draft. Item (2) is added for response to the JICA comments to specify two cases.”. However, as thee results, these do not meet our requests.</p> <p>② For example, (2) and (3) in 3.1.2 are not logically contrast. (2) is for the case of the utility which owner is a third party. (3) is for the case of underground utility which existing is not known. Then (4) is for the case of utility which owner is the Employer. These do not logically flow.</p> <p>We modified the draft paying attention not to change the original intention as the original was prepared on the basis of different owners. Please review them.</p> <p>As there are many revisions required, the draft R2 are copied to other sheets and added our comments on them.</p> <p>Please keep in your mind, we are planning to review (bird's eye view) whole document of JSSS which will be submitted us after several months as discussed last time and there is a possibility we will give more comments to items to which we have not commented this time.</p>			
<p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 General</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), and which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 General</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”) which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 Generally</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p><i>I have added the following as in any event it should apply; compliance with such procedures is usually mandatory and non-compliance will impact upon safety:</i></p> <p>(2) If Underground or Concealed Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the authority.</p> <p><i>Reference now included in the User Guide;</i></p> <p>NK: Original (2) is replaced with new (2). There is difference between as specified in PSS and unless otherwise stated in PSS.</p>	<p>3 UNDERGROUND, CONCEALED AND OVERHEAD SERVICES</p> <p>3.1 UNDERGROUND AND CONCEALED SERVICES</p> <p>3.1.1 Generally</p> <p>(1) This Section applies where there are existing underground or concealed pipes, cables, wires, ducts and the like within the Site (hereinafter collectively referred to as “Underground or Concealed Services”), which may require locating, preserving, avoiding and protecting, diverting, removing, relocating, replacing.</p> <p>(2) If Underground or Concealed Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the authority.</p>

<p>(2) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third party (called as “the owner of Underground or Concealed Services”), the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p> <p>JC: 単に third party でよいと思います。 JC think it is better to simply “third part”.</p> <p>JC: この後、owner が発注者であろうが、第三者であろうが owner という言葉で理解できるように記述するために削除します。 After this, the sentence is deleted to specify owner is any of the Employer and third party.</p> <p>NK: modified as commented.</p>	<p>(2) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(3) In the case of Underground or Concealed Services which are the property of a third party, the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p>	<p>(3) The Contractor shall perform the work in connection with the Underground or Concealed Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(4) In the case of Underground or Concealed Services which are the property of a third party, the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p> <p><i>As commented before and explained in January, why is all of this text relating to <u>property ownership, permissions and contact with utility companies necessary, when it has nothing to do with safety and it is not always correct?</u></i></p> <p><i>Very often (if not usually) for JICA funded drainage and sewage treatment improvement projects, the executing agency is also the owner and operator of the underground and overhead utility services. In such cases the Employer and relevant authority are often one and the same and in this common case, the contact arrangements, requirements for permissions etc. stipulated in the JICA draft, do not apply.</i></p> <p><i>Sometimes also for example specialist local subcontractors who are already registered with the utility authority or company are required to be used. Actual arrangements can be very different.</i></p> <p><i>It is unusual and potentially risky to assume that the JICA specified arrangements apply as a common basis on all projects when they don't and I recommend that all is omitted.</i></p> <p><i>I am aware that sometimes the employer may require the contractor to make improper arrangements and but this is not the norm and also sometimes also the contractor does not perform correctly. However, I understood that JSSS is a safety specification, not a contract procedural manual and I suggest that it should not be used for this latter purpose.</i></p> <p><i>The following paragraph for example, is contractually and practically incorrect, the contractor has no obligation to get permission to execute the works, why should he?? If this is stated there is a strong likelihood that it will negatively affect the quality of the Bid Documents. Also, if the authority doesn't give such permission or delays in giving it, or changes the scope or working methods and timing the consequences and greatly confused. The other aspects of this clause are not relevant to safety and JSSS and have no real meaning.</i></p> <p><i>The scope and requirements for all work should be investigated and clarified beforehand by the executing agency and consultant and properly specified by the Employer in the Bidding documents before requesting Bids.</i></p> <p>NK: There are two cases regarding Underground or Concealed Services in ODA projects, Case 1: the owner and the Employer are same such as drainage and sewage treatment improvement projects mentioned</p>	<p>(3) In the case of Underground or Concealed Services which are the property of a third party, the Contractor shall take the procedure of obtaining permission for the work mentioned in (4) below.</p>
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<p>(4) In accordance with the legally binding agreement between the Employer and the owner of Underground or Concealed Services obtained by the Employer regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission of the owner of Underground or Concealed Services to execute the work according to following the preparations described in JSSS 3.1.2 as well as the requirements of the Contract and the instruction of the Engineer.</p> <p>JC: コントラクターにとっては結果が大事(障害なく着工できることが大事)であり、発注者と Utility オーナーとの関係が legally binding か否かは関係ありません。</p> <p>For the Contractor, it is important that they can commence the Works without any obstacle. It is not matter whether the relation between the Employer and the owner of utility is bounded legally or not.</p> <p>JC: 全体として、発注者・エンジニアの支援の下、3. 1.2 の準備作業を行い、オーナーからの工事許可を得る、という流れになります。</p> <p>The flow of activity of the Contractor is 1) preparation</p>	<p>(4) In accordance with the agreement between the Employer and the owner of Underground or Concealed Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission to execute the work following the preparations described in JSSS 3.1.2 as well as the requirements of the Contract and the instruction of the Engineer.</p>	<p>above, and Case 2: they are different such as road improvement projects on road where swedge, gas, water, etc. pipe lines, electricity cables.</p> <p>JICA wants:</p> <p>1) to specify for both cases because many claims for time extension and cost by the Contractors have been occurred due to the insufficient preparation by the executing agency/Employer before Bids such as no/insufficient information of the services and insufficient coordination between the owner/operator and the Contractor.</p> <p>2) to specify the Employer shall get permission of the Works from the owner/operator of the services and all information of the services such as locations, dimensions, etc., then provide the information and required works to the Contractor in Bid document.</p> <p>3) to specify the Employer/the Engineer to coordinate between the owner/operator and the Services in the Works.</p> <p><u>JICA knows about that their requirement is exceeding the safety requirement as we have advised, however they want to specify in this Chapter.</u></p> <p><u>NK will prepare as JICA wants, JICA will review this Chapter in the review of all JSSS in the DFR.</u></p> <p>(5) In accordance with the agreement between the Employer and the owner of Underground or Concealed Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission to execute the work following the preparations described in JSSS 3.1.2 as well as the requirements of the Contract and the instruction of the Engineer.</p> <p><u>If JSSS includes (unnecessary) requirements for permissions and contact with Utility Companies as above then it also requires to state where such requirements are not necessary i.e. where the services are owned by the employer, which was why I changed the earlier draft so it was more balanced.</u></p> <p><u>However, if the former isn't required then neither is the latter.</u></p> <p><u>With the benefit of more time to consider this and as also suggested by Ito san in our meeting in January to explore ways to simplify this Chapter, I strongly recommend that this Chapter should be changed:</u></p> <p><u>1) To concentrate on safety matters only.</u></p>	<p>(4) In accordance with the agreement between the Employer and the owner of Underground or Concealed Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Underground or Concealed Services to obtain a permission to execute the work following the preparations described in JSSS 3.1.2 as well as the requirements of the Contract and the instruction of the Engineer.</p>
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<p>work mentioned in 3.1.2 with assistance of the Employer and the Engineer, and 2) obtaining permission of works from the owner.</p> <p>NK: modified as commented.</p> <p>(5) In the case of Underground or Concealed Services which are the property of the Employer, the Contractor shall take the necessary procedure for the work in accordance with the Contract. the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.</p> <p>JC: (4)と(5)が論理的な対比になっていません。(4)はオーナーによる permission を論じているのに対し、(5)は「契約に従って行うこと」になっています。「オーナーによる permission を取得することに着目した対比であるべきです。発注者がオーナーである場合、当然かかる permission は所与のものであるべきものです。</p> <p>(4) and (5) are not logically contrast. (4) is described permission of the owner, however (5) is “in accordance with the Contract”. (5) shall be specified focusing “to get permission of the owner” as contrast of (4). In case that the owner is the Employer, the permission shall be already given.</p> <p>NK: modified as commented.</p> <p>3.1.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance</p>	<p>(5) In the case of Underground or Concealed Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.</p> <p>3.1.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) In case the details of Underground or Concealed Services (position, depth, route and specifications for relocation/protection, etc.), the</p>	<p>2) To delete any ownership, permissions, contact arrangements and</p> <p>3) To include clear requirements for the Employer to carry out proper pre-bid studies and prepare precise bid documentation and that this shall be included in the User Guide.</p> <p>I have edited this Chapter and will edit the User Guide on this basis.</p> <p>NK: After the meeting in January, JICA gave comments and modified in March. NK want to submit this Chapter as JICA comments and request them to review this in the DFR.</p> <p>(6) In the case of Underground or Concealed Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.</p> <p>3.1.2 Preparation and Work Planning</p> <p>(1) Where Underground or Concealed Services are the property of a relevant authority or a third party and the Contractor is required under the Contract to perform work thereon or to locate and protect same, Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for locating, protecting, diverting, removing, replacing or the like of any Underground or Concealed Services:</p> <p>The following added paragraph in your draft is an unnecessary duplication of the above:</p> <p>NK: Agreed.</p> <p>(2) In case the details of Underground or Concealed Services (position, depth, route and specifications for relocation/protection, etc.), the</p>	<p>(5) In the case of Underground or Concealed Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.1.2.</p> <p>3.1.2 Preparation and Work Planning</p> <p>(1) Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for locating, protecting, diverting, removing, replacing or the like of any Underground or Concealed Services:</p>
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<p>by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system; In case the details of Underground or Concealed Services (position, depth, route and specifications for relocation/protection, etc.), the Contractor shall carry out the following preparatory work prior to the commencement of the work:</p> <p>(2) In the case of Underground or Concealed Services which are the property of a legally constituted public authority or a third:</p> <p>(a) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system;</p> <p>JC: 以下、ownerという言葉が出てきますが、これは発注者であろうが、第三者であろうが区別する必要はないと思います。</p> <p>JC considers it is not necessary to distinguish the Employer or the third party as the owner after this.</p> <p>NK: modified as commented.</p> <p>(b) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner of Underground or Concealed Services, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, of for the required works, requirements and procedures of the owner of Underground or Concealed Services;</p> <p>JC: 3.1.1 で発注者の reasonable assistance に言及しているので不要。またこれを消すことで、owner が発注者であろうが、第三者であろうが、意味が通じる文章になります。</p> <p>It is not necessary as 3.1.1 has described “reasonable assistance”. By deleting this sentence, (b) becomes to specify for both owners (the Employer and the third party).</p> <p>JC: これはいらぬような気がします。「工事をするために必要な地下埋設物」というように読めるような気がするからです。ここで論じているのは、保護をかけるような必要がある地下埋設物</p> <p>“of the required works” seems not necessary because JC think it may be read as “Underground Services required for the Works”. (b) specifies about Underground Services to be protected.</p> <p>NK: modified as commented.</p> <p>(c) Obtain particular information from the owner of Underground or Concealed</p>	<p>Contractor shall carry out the following preparatory work prior to the commencement of the work:</p> <p>(a) Prepare a Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Underground or Concealed Services or the Employer, emergency call list and communication system;</p> <p>(b) The Contractor may consult with the owner of Underground or Concealed Services, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, requirements and procedures of the owner of Underground or Concealed Services;</p> <p>(c) Obtain particular information from the owner of Underground or Concealed</p>	<p>Contractor shall carry out the following preparatory work prior to the commencement of the work:</p> <p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required preparatory work and ensuring the safety of all persons engaged thereon;</p> <p>(b) Prepare an emergency call list and communication procedure;</p> <p>(c) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner's representative of the relevant authority or third party, give notice of work commencement, obtain further details of the location, content and condition of the Underground or Concealed Services, of the required works, requirements and procedures of the owner;</p> <p>(d) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-</p>	<p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon;</p> <p>(b) Prepare an emergency call list and communication procedure;</p> <p>(c) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-</p>
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<p>Services on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and</p> <p>(d) Provide and use cable avoidance tools such as Cable Locator, and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>(e) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner of Underground or Concealed Services and the Engineer.</p> <p>(f) The Method Statement shall be revised based on the information obtained from the owner of Underground or Concealed Services and the exploratory hand excavation.</p> <p>(2) In the case of Underground or Concealed Services which existence are predicted at the Site by the Contractor, but details are not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>JC: このスペックは入札書類に含まれる文書なので、ここに「コントラクターによって予見される」というのは不適切です。 As the JSSS is included in bid documents, it is not proper to mention "existence is predicted at the Site by the Contractor".</p> <p>NK: modified as commented.</p>	<p>Services on procedures for emergency de-energisation of the Underground or Concealed Services in case of an accident; and</p> <p>(d) Provide and use cable avoidance tools such as Cable Locator, and locate the location, route or position on ground surfaces, walls and floors of Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>(e) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed and proceed to expose and protect same or prepare for the required work in accordance with the Contract and the instructions of the owner of Underground or Concealed Services and the Engineer.</p> <p>(f) The Method Statement shall be revised based on the information obtained from the owner of Underground or Concealed Services and the exploratory hand excavation.</p> <p>(2) In case Underground or Concealed Services of which existence are predicted at the Site, but details are not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p>	<p>energisation of the Underground or Concealed Services in case of an accident;</p> <p>(e) Provide and use cable avoidance tools or cable locators, trace the position and routes on ground surfaces, walls and floors of all Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area.</p> <p>Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed Services and proceed to expose and protect same or prepare for the required work; and, in accordance with the Contract and the instructions of the owner's representative of the relevant authority or third party and the Engineer.</p> <p>(f) The Method Statement shall be revised based on the information obtained from the above locating and exploratory work</p> <p><i>The following is not connected with safety and I do not recommend that it is included, none of this is related to safety matters which are not covered by the above. It will create misunderstanding and potential conflict, for example - what is the meaning of "existence is predicted but no detail given"? What is a "proposal" in a contract sense. "Variation"? Why such engineer's input?</i></p> <p>NK: The original (2) is Variation procedure. JICA want to specify this to avoid risk of accident due to the Concealed Services which are not shown in the Contract, however the Contractor predict it during the Works. The procedures are to detail, so NK propose as below:</p> <p>In case Underground or Concealed Services of which existence are predicted at the Site, but details are not shown in the Contract, the Contractor shall inform the Engineer of the existence for the Engineer's instruction to the Contractor.</p> <p>(3) In case Underground or Concealed Services of which existence are predicted at the Site, but details are not shown in the Contract, the Contractor shall take the following procedure and preparation prior to the commencement of the work.</p> <p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services and submit it to the Engineer.</p> <p>(b) Following the instruction by the Engineer regarding the proposal, create Method Statement showing the type, the owner of Underground or Concealed Services and</p>	<p>energisation of the Underground or Concealed Services in case of an accident;</p> <p>(d) Provide and use cable avoidance tools or cable locators, trace the position and routes on ground surfaces, walls and floors of all Underground or Concealed Services, mark routes with paint and/or wooden pegs or barriers and clear signage and ensure that no unauthorised work take place within the area;</p> <p>(e) Conduct careful exploratory hand excavation to locate the exact position, depth and route of the Underground or Concealed Services and proceed to expose and protect same or prepare for the required work; and</p> <p>(f) The Method Statement shall be revised based on the information obtained from the above locating and exploratory work.</p> <p>(2) In case Underground or Concealed Services of which existence are predicted at the Site, but not shown in the Contract, the Contractor shall inform the Engineer of the existence for the Engineer's instruction to the Contractor.</p>
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<p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services and submit it to the Engineer.</p> <p>(b) Following the instruction by the Engineer regarding the proposal, create Method Statement showing the type, the owner of Underground or Concealed Services and location of assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation,</p> <p>(c) (Accompanied by a representative of the Employer and Engineer) consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(d) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p>(3) Where Underground or Concealed Services are the property of the Employer, the Contractor shall make relevant preparations as in JSSS 0 (2) and (3) and perform the work in connection with the Underground or Concealed Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>JC: as commented, not necessary to separately specify (3) for the Employer's property.. JC: deleted.</p> <p>(3) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the work.</p> <p>JC: 今までも議論があったと思いますが、一律2メートルの範囲で禁止というのはやりすぎです。 It is excessive to specify not to be allowed within 2m for all cases as already discussed</p> <p>NK: modified as commented.</p> <p>(4) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Contract, or instructed by the Engineer, the Contractor shall:</p>	<p>(a) Prepare a brief proposal for exploratory excavation of the assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation,</p> <p>(b) Consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(c) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p>(3) Machine excavation shall not be allowed when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the work.</p> <p>(4) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Contract, or</p>	<p>location of assumed Underground or Concealed Services, method, quantity and specifications of exploratory excavation.</p> <p>(c) Consult with the owner of Underground or Concealed Services about the Method Statement for the exploratory excavation and obtain agreement to the exploratory excavation.</p> <p>(d) Implement the exploratory excavation and submit the Engineer the results of exploratory excavation for further instruction by the Engineer.</p> <p>Why is the following changed? No machine excavation should start until locations and routes are explored and indicated as above and then precautions should be taken due to the accuracy of the equipment and survey. It needs a criterium to be stated.</p> <p>NK: The original (3) is modified by deleting the phrase of 2m deep to specify all machine excavation shall not be allowed.</p> <p>(4) Machine excavation shall not be allowed within 2m of the marked route of Underground or Concealed Services or otherwise when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the excavation.</p> <p>(5) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety</p>	<p>(3) Machine excavation shall not be allowed when there is any risk that Underground or Concealed Services may exist in the location or vicinity of the excavation.</p> <p>(4) The Contractor shall take all measures necessary to ensure the protection and safety of road traffic, pedestrians, Contractor's Personnel and any other persons affected by or potentially affected by the Works as required by the Contract and also by JSSS including JSSS 2.2 [Risk Control Around the Site].</p> <p>3.1.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety</p>
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<p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground.</p> <p>(3) Restore surface paving with material and methods specified, paying attention not leaving difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(4) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(5) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(6) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(7) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(8) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p> <p>(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and</p>	<p>instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling and compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground.</p> <p>(3) Restore surface paving with material and methods specified, paying attention not leaving difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(4) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(5) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(6) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(7) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(8) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p>	<p>Specification, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling, compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground or Concealed Services.</p> <p><i>"Drains" is a correct and collective construction term for all types of surface water, waste or foul pipe drains that will be encountered frequently when excavating for other services. These drains will require such treatment if and when they are found and I do not recommend that it be deleted.</i></p> <p>NK: Added as recommended.</p> <p>(3) Take care to expose, support and protect any drains, other services (new or existing) which follow or cross the route of Underground or Concealed Services.</p> <p>(4) Reinstatement surface paving with material and methods specified, paying attention not leave any difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(5) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(6) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(7) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(8) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(9) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p>	<p>Specification, the Contractor shall:</p> <p>(1) Protect and secure all Underground or Concealed Services throughout the execution of the Works and avoid all damage to such services and adjacent areas, particularly when backfilling, compacting and reinstating surfaces.</p> <p>(2) Take care not to damage the Underground Services or Concealed Services when using power tools for example asphalt cutting machine to break through paved surfaces above Underground or Concealed Services.</p> <p>(3) Take care to expose, support and protect any drains, other services (new or existing) which follow or cross the route of Underground or Concealed Services.</p> <p>(4) Reinstatement surface paving with material and methods specified, paying attention not leave any difference in level with surrounding pavement and replace all surface markings and signage.</p> <p>(5) Adequately test all Underground or Concealed Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(6) Implement strict safety and fire prevention measures throughout the work including prohibiting the use of equipment that can create any damage or fire hazard (such as welding, cutting and electrical equipment) in the vicinity of any Underground or Concealed Services conveying flammable, combustible or explosive liquids or gases.</p> <p>(7) Be aware of and avoid all risk of electric shock when excavating for or near any cables, wires or cable ducts, ensure the safety of all Contractor's Personnel and ensure the provision and use of PPE.</p> <p>(8) Be aware of and avoid all risk of subsidence or collapse of excavations due to Contractor's Equipment, vehicles, other equipment or other activities being too close to any excavation.</p> <p>(9) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Underground or Concealed Services is taking place.</p>
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<p><i>the Like</i>] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(10) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(11) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(12) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(1) Location of live cables and equipment.</p> <p>(2) Risk of electric shock from live cables or equipment.</p> <p>(3) Separation distances from live cables and equipment.</p> <p>(4) Work procedure,</p> <p>(5) Preventive measures against electric shock,</p> <p>(6) PPE to be used.</p> <p>(7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5.</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.20 [<i>Accident Response Plan</i>].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p> <p>3.1.5 Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [<i>Accident Response Plan</i>].</p>	<p>(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [<i>Spotters, Flagmen and the Like</i>] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(10) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(11) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(12) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer and to the authority and/or third party as appropriate.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(1) Location of live cables and equipment.</p> <p>(2) Risk of electric shock from live cables or equipment.</p> <p>(3) Separation distances from live cables and equipment.</p> <p>(4) Work procedure,</p> <p>(5) Preventive measures against electric shock,</p> <p>(6) PPE to be used.</p> <p>(7) Accident training and response measures to an electric shock accident in accordance with JSSS 3.1.5.</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.20 [<i>Accident Response Plan</i>].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p>	<p>(10) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [<i>Spotters, Flagmen and the Like</i>] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(11) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(12) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(13) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer. and to the relevant authority and/or third party as appropriate.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(1) Location of live cables and equipment.</p> <p>(2) Risk of electric shock from live cables or equipment.</p> <p>(3) Separation distances from live cables and equipment.</p> <p>(4) Work procedure,</p> <p>(5) Preventive measures against electric shock,</p> <p>(6) PPE to be used.</p> <p>(7) Electric shock accident in accordance with JSSS 3.1.5 エラー! 参照元が見つかりません。 [<i>Electric Shock Treatment</i>].</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.24 [<i>Accident Response Plan</i>] and JSSS 1.25.2 [<i>Measures at the Time Accidents Occur</i>].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p> <p>After further consideration, I feel that the following clause should be included here as this impact with existing services is likely to be needed here. I have therefore transferred here from Chapter 4:</p> <p>NK: Agreed to specify Electric shock treatment at the first place in JSSS.</p>	<p>Services is taking place.</p> <p>(10) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [<i>Spotters, Flagmen and the Like</i>] when work in progress poses any risk to the Underground or Concealed Services, Contractor's Personnel or the Works.</p> <p>(11) Provide electrical cable marker tiles over all buried wires, cables and cable ducts to warn and protect against the risk of future mechanical damage to same.</p> <p>(12) Provide permanent markers or signage at the surface to warn of the presence, route and any danger of any Underground or Concealed Services.</p> <p>(13) Prepare as-built drawing of Underground or Concealed Services after completion of the associated work showing accurate positions, depth, sizes, routes and details and submit to the Engineer.</p> <p>3.1.4 Information to Contractor's Personnel</p> <p>Prior to the start of work to or in the vicinity of Underground or Concealed Services, the Contractor shall instruct relevant Contractor's Personnel of the following:</p> <p>(1) Location of live cables and equipment.</p> <p>(2) Risk of electric shock from live cables or equipment.</p> <p>(3) Separation distances from live cables and equipment.</p> <p>(4) Work procedure,</p> <p>(5) Preventive measures against electric shock,</p> <p>(6) PPE to be used.</p> <p>(7) Electric shock accident in accordance with JSSS 3.1.5 エラー! 参照元が見つかりません。 [<i>Electric Shock Treatment</i>].</p> <p>(8) Response in the event of an accident in accordance with JSSS 1.24 [<i>Accident Response Plan</i>] and JSSS 1.25.2 [<i>Measures at the Time Accidents Occur</i>].</p> <p>(9) Appropriate procedures in the case of accidents arising from contact with or damage to other Underground or Concealed Services.</p>
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<p>3.2. OVERHEAD SERVICES</p> <p>3.2.1. General</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p>	<p>3.1.5 Electrical Safety Training and Accident Measures</p> <p>Refer to JSSS 1.21 [Accident Response Plan].</p> <p>3.2 OVERHEAD SERVICES</p> <p>3.2.1 General</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p>	<p>3.1.5 Electrical Shock Treatment</p> <p>The following measures shall be taken in the event of an electric shock accident.</p> <p>(1) Prohibit workers from touching the chassis or body of any Contractor’s Equipment or materials that have become electrified by any live circuit and keep all Contractor’s Personnel well away from such equipment, materials and the working area.</p> <p>(2) When the unit of Contractor’s Equipment which is in contact with or in close proximity to a live circuit does not get an electrical shock, the operator shall immediately move the equipment to an adjacent safe location.</p> <p>(3) When it is not possible to move the Contractor’s Equipment away, the operator shall remain in the cabin until the affected live circuits are de-energised.</p> <p>(4) Prevent secondary electric shock accident by permitting only those who have received training in electrical rescue to rescue the casualties of an electric shock accident.</p> <p>(5) Immediately perform primary lifesaving measures such as CPR, if necessary use an Automated External Defibrillator (AED) and call for emergency medical support.</p> <p>(6) Report to the Engineer in accordance with JSSS 1.25.2 [Measures at the Time Accidents Occur] and where applicable to the representative of the relevant authority.</p> <p>3.2 OVERHEAD SERVICES</p> <p>3.2.1. Generally</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>Please refer to above notes, I suggest the addition of the following:</p> <p>NK: Agreed.</p> <p>(2) If Overhead Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official regulations and procedures of the relevant authority.</p>	<p>3.1.5 Electrical Shock Treatment</p> <p>The following measures shall be taken in the event of an electric shock accident.</p> <p>(1) Prohibit workers from touching the chassis or body of any Contractor’s Equipment or materials that have become electrified by any live circuit and keep all Contractor’s Personnel well away from such equipment, materials and the working area.</p> <p>(2) When the unit of Contractor’s Equipment which is in contact with or in close proximity to a live circuit does not get an electrical shock, the operator shall immediately move the equipment to an adjacent safe location.</p> <p>(3) When it is not possible to move the Contractor’s Equipment away, the operator shall remain in the cabin until the affected live circuits are de-energised.</p> <p>(4) Prevent secondary electric shock accident by permitting only those who have received training in electrical rescue to rescue the casualties of an electric shock accident.</p> <p>(5) Immediately perform primary lifesaving measures such as CPR, if necessary use an Automated External Defibrillator (AED) and call for emergency medical support.</p> <p>(6) Report to the Engineer in accordance with JSSS 1.25.2 [Measures at the Time Accidents Occur] and where applicable to the representative of the relevant authority.</p> <p>3.2 OVERHEAD SERVICES</p> <p>3.2.1 Generally</p> <p>(1) This Section applies where there are exposed or overhead power or communication cables, wires, ducts, pipes and the like within the Site (hereinafter collectively referred to as “Overhead Services”), and which may require preserving, protecting, diverting, removing, relocating, replacing.</p> <p>(2) If Overhead Services are the property of a relevant authority and unless otherwise stated in the Particular Safety Specification, the Contractor shall comply with the official</p>
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<p>(3) In the case of the Overhead Services which are the property of a legally constituted public authority or a third party (called as "the owner of Overhead Services"), the Contractor shall take the procedure for the works mentioned in (4) below.</p> <p>(4) In accordance with the legally binding agreement between the Employer and the owner of Overhead Services obtained by the Employer regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works according to following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.</p> <p>JC: (3)~(5)については地下埋設と同様になるように修正。(3) to (4) are modified and (5) is added to be similar to 3.1.1.</p> <p>NK: modified as commented.</p> <p>3.2.2. Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Overhead Services or the Employer, emergency call list and communication system;</p> <p>(2) In the case of Overhead Services which are the property of the owner of Overhead</p> <p>(a) (Accompanied by a representative of the Employer and Engineer) the Contractor may consult with the owner of Overhead Services, give notice of work commencement, obtain further details of the location, content and condition of the Overhead Services for the required works, requirements and procedures of the owner of Overhead Services;</p> <p>JC: これはいらないような気がします。「工事をするために必要な電源」というように読めるような気がするからです。ここで論</p>	<p>(3) In the case of the Overhead Services which are the property of a third party, the Contractor shall take the procedure for the works mentioned in (4) below.</p> <p>(4) In accordance with the agreement between the Employer and the owner of Overhead Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.</p> <p>(5) In the case of Overhead Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.2.2.</p> <p>3.2.2 Preparation and Work Planning</p> <p>The Contractor shall make the following preparations prior to commencing the related work for locating, protecting, diverting, removing, replacing or the like as specified in the Contract:</p> <p>(1) Prepare a Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon, necessity of attendance by the owner of Overhead Services or the Employer, emergency call list and communication system;</p> <p>(2) Wherever necessary, the Contractor shall:</p> <p>(a) Consult with the owner of Overhead Services, give notice of work commencement, obtain further details of the location, content and condition of the Overhead Services, requirements and procedures of the owner of Overhead Services;</p>	<p><i>Please refer to above notes, I suggest the following is deleted:</i></p> <p>NK: Agreed.</p> <p>(3) The Contractor shall perform the works in connection with the Overhead Services as specified in the Particular Safety Specification and take measures specified in this Chapter.</p> <p>(4) In the case of the Overhead Services which are the property of a third party, the Contractor shall take the procedure for the works mentioned in (4) below.</p> <p>NK: As explained in 3.1.1 (5) above, we specify as JICA specified.</p> <p>(5) In accordance with the agreement between the Employer and the owner of Overhead Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.</p> <p>(6) In the case of Overhead Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.2.2.</p> <p>3.2.2. Preparation and Work Planning</p> <p>(1) Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for protecting, diverting, removing, replacing or the like of any Overhead Services:</p> <p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon;</p> <p>(b) Prepare an emergency call list and communication procedure; and</p>	<p>regulations and procedures of the relevant authority.</p> <p>(3) In the case of the Overhead Services which are the property of a third party, the Contractor shall take the procedure for the works mentioned in (4) below.</p> <p>(4) In accordance with the agreement between the Employer and the owner of Overhead Services regarding the actual scope of work to be carried out, permission for its execution and details of the procedures and requirements (including responsibility for insurance and safety procedures), the Contractor (with reasonable assistance of the Employer and Engineer) may consult with the owner of Overhead Services to obtain a permission of the owner of Overhead Services to execute the works following the preparations described in JSSS 3.2.2 as well as the requirements of the Contract and the instructions of the Engineer.</p> <p>(5) In the case of Overhead Services which are the property of the Employer, the permission mentioned in (4) above shall be deemed to have been provided by the Employer subject to the preparations described in JSSS 3.2.2.</p> <p>3.2.2 Preparation and Work Planning</p> <p>(1) Unless otherwise specified in the Particular Safety Specification, the Contractor shall make the following preparations prior to commencing any work for protecting, diverting, removing, replacing or the like of any Overhead Services:</p> <p>(a) Prepare a detailed Method Statement describing the measures for carrying out the required work and ensuring the safety of all persons engaged thereon;</p> <p>(b) Prepare an emergency call list and communication procedure; and</p>
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<p>じているのは、保護をかけるような必要がある電線</p> <p>“for the required works” seems not necessary because JC think it may be read as “Overhead Services required for the Works”. (b) specifies about Overhead Services to be protected.</p> <p>NK: deleted as commented.</p> <p>(b) Obtain particular information from the owner of Overhead Services on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(c) Protect the Overhead Services in accordance with the Contract and the instructions of the owner of Overhead Services and the Engineer.</p> <p>(3) Where Overhead Services are the property of the Employer, the Contractor shall make necessary preparations as in 3.2.2 (2) and perform the work in connection with the Overhead Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>JC: as commented, not necessary to separately specify (3) for the Employer’s property.</p> <p>NK: deleted.</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>Unless otherwise specified in the Contract Bidding Documents, or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately After the test of Overhead Services after at the completion of any diversion, replacement or alteration work by the owner of Overhead Services or the Employer, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution. Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to mitigate future risk of injury, leakage or pollution.</p> <p>JC: modified.</p> <p>NK: modified as commented.</p> <p>(3) Be aware of and avoid all risk of electric shock when working near any cables or wires to ensure the safety of all Contractor’s Personnel and ensure the provision and use of PPE.</p> <p>(4) Be aware of and avoid all mitigate risk of subsidence or collapse of support structures of</p>	<p>(b) Obtain particular information from the owner of Overhead Services on procedures for emergency de-energisation of the Overhead Services in case of an accident; and</p> <p>(c) Protect the Overhead Services in accordance with the Contract and the instructions of the owner of Overhead Services and the Engineer.</p> <p>3.2.3 Requirements and Precautions for Charged Lines</p> <p>Unless otherwise specified in the Contract or instructed by the Engineer, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to mitigate future risk of injury, leakage or pollution.</p> <p>(3) Be aware of and avoid all risk of electric shock when working near any cables or wires to ensure the safety of all Contractor’s Personnel and ensure the provision and use of PPE.</p>	<p>(c) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-energisation of the Overhead Services in case of an accident.</p> <p>(2) Where Overhead Services are the property of the Employer, the Contractor shall make necessary preparations as in 3.2.2. above and perform the work in connection with the Overhead Services as specified in the Contract and in accordance with the instructions of the Engineer.</p> <p>3.2.3. Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(3) Be aware of and avoid all risk of electric shock when working near any cables or wires, ensure the safety of all Contractor’s Personnel and ensure the provision and use of PPE.</p> <p>Suggest that “remove all risk” (which is contractually correct) is clearer and more preferable to “mitigate risk”. This needs to be absolute and clear, “mitigate” is neither.</p>	<p>(c) Obtain particular information from the Employer or relevant authority on the procedures for emergency de-energisation of the Overhead Services in case of an accident.</p> <p>3.2.3 Requirements and Precautions</p> <p>Unless otherwise specified in the Particular Safety Specification, the Contractor shall:</p> <p>(1) Protect and secure all Overhead Services throughout the execution of the Works.</p> <p>(2) Adequately test all Overhead Services at the time of completion of any diversion, replacement or alteration work, to ensure the safety and integrity and to avoid any future risk of injury, leakage or pollution.</p> <p>(3) Be aware of and avoid all risk of electric shock when working near any cables or wires, ensure the safety of all Contractor’s Personnel and ensure the provision and use of PPE.</p>
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Overhead Services due to excavations or other being too close.

JC: avoid all risk は不可能。ここだけでなく、他の章でも出てきている可能性があると思われるので以後注意して下さい。

It is impossible to avoid all risk. Please pay attention to this, which may be specified in other clauses.

NK: modified as commented.

(5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.

(6) Provide insulating protective pipe to the Overhead Services.

(7) Create safe zones by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers and prohibit entry outside entering these ranges.

JC: このようにした方が、(7)と(8)のつながりが良いと思います。すなわち、(7)では safe zone の設定、(8)ではその safe zone に侵入させないように機械を使用する、という流れになります。This revised description is smooth connection between (7) and (8) as (7) specifies to create safe zone and (8) does to operate machinery without entering in the safe zone.

NK: modified as commented.

(8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.

(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.

(10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V)

(4) Be aware of and mitigate risk of subsidence or collapse of support structures of Overhead Services due to excavations or other being too close.

To MD, please review this comment and if same revision is necessary in the above (3).

(5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.

(6) Provide insulating protective pipe to the Overhead Services.

(7) Create safe zones free from danger arising from use of Contractor's Equipment by demarcating the route and turning ranges of Contractor's Equipment with adequate signage and barriers.

To MD: Is this "safe zones" to be replaced with "dangerous zones" in (7) and (8) because (8) specifies to prevent Equipment entering the safety zone?

(8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.

(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk to the Overhead Services, Contractor's Personnel or the Works.

(10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the public authority or third party that owns the Overhead Services:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
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(4) Be aware of and avoid all risk of subsidence or collapse of support structures of Overhead Services due to excavations being too close.

(5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.

Pipe and casings are different, I suggest both are correct

(6) Provide insulating protective pipe or casings to the Overhead Services.

(7) Create safe zones free from danger arising from the use Contractor's Equipment by demarcating the route and turning ranges and providing adequate signage and barriers.

(8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.

(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk of close proximity or contact with Overhead Services, Contractor's Personnel or the Works.

(10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the relevant authority:

Table 3.2.1: Safe Separation Distances

	Circuit Voltage	Separation Distance
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(4) Be aware of and avoid all risk of subsidence or collapse of support structures of Overhead Services due to excavations being too close.

(5) Provide adequate temporary barriers, signage, markings and lighting to all areas where work on or adjacent to Overhead Services is taking place.

(6) Provide insulating protective pipe or casings to the Overhead Services.

(7) Create safe zones free from danger arising from the use Contractor's Equipment by demarcating the route and turning ranges and providing adequate signage and barriers.

(8) Prevent Contractor's Equipment, wire ropes or chains from entering the safe zones and limit the moving range of crane jibs and other high equipment.

(9) Assign a full time Spotter in accordance with the requirements of JSSS 2.4 [Spotters, Flagmen and the Like] when work in progress poses any risk of close proximity or contact with Overhead Services, Contractor's Personnel or the Works.

(10) Maintain a safe separation distance between any charged electrical circuit and Contractor's Personnel, Contractor's Equipment, Scaffolding and any other Temporary Works, wire rope, tools and materials. The separation distance shall be the maximum relevant value shown in the following Table 3.2.1, any values that may be prescribed by the Laws and regulations of the Country or any values that may be prescribed by the regulations of the relevant authority:

Table 3.2.1: Safe Separation Distances

		increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

	Circuit Voltage	Separation Distance
1	Extra-high Voltage (7000V and above)	2m (20cm to be added for every 10,000V increase and fraction from 60,000V)
2	High Voltage (600V up to 7000V)	1.2m
3	Low Voltage (Less than 600V)	1m

3.2.4 Information to Contractor's Personnel

Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following in addition to JSSS 3.1.4 (1) to (6):

- (1) Accident training and response measures to an electric shock accident in accordance with JSSS 3.2.5.

JC: 3.2.5 に飛んで、3.2.5 では再び 1.21 に飛んでいます、従来までの検討では Accident Response Plan の原案は特別チームを編成せよ、といった内容に鑑み、大ナタを振るっているはず。1.21 がどのような内容になるのかが確認できない現状ではコメントできません。全体が提出された際に改めて検討します。

(1) specifies to refer to 3.2.5 and 3.2.5 does 1.2.1. In the last review, Accident Response Plan is requested to be drastically modified as last draft specified to establish special team. Because the content of revised 1.21 cannot be confirmed, JICA cannot comment now. After all JSSS is submitted, JICA will review this again.

NK: It leaves as it is tentatively.

- (2) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan].
- (3) Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services.

JC: May we know why this specifies "other"?

NK: ask to MD about this.

3.2.5. Electrical Safety Training and Accident Measures

Refer to JSSS 1.21 [Accident Response Plan].

JC: 上記 3.2.4 に対するコメント参照。Please refer to the

3.2.4 Information to Contractor's Personnel

Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the following in addition to JSSS 3.1.4 (1) to (6):

- (1) Accident training and response measures to an electric shock accident in accordance with JSSS 3.2.5.

- (2) Response in the event of an accident in accordance with JSSS 1.20 [Accident Response Plan].
- (3) Appropriate procedures in the case of accidents arising from contact with or damage to other Overhead Services.

MD: Please add or modify (3) to make clear "other".

3.2.5 Electrical Safety Training and Accident Measures

Why delete? A record is necessary whether specified elsewhere or not.

NK: Provision of As-built drawings was deleted in the JICA comments of 12/16 to Issue 2 that "better not to extend the scope of the JSSS to the operation stage". NK propose the As-built drawing for Underground services but not for Overhead Services. Therefore (11) is deleted.

(11) Prepare as-built drawings of Overhead Services after completion of the associated work showing accurate positions, sizes, routes and details and submit to the Engineer.

3.2.4. Information to Contractor's Personnel

Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the items listed JSSS 3.1.4 (1) to (6) plus the following:

- (1) Accident training and response measures to an electric shock accident in accordance with JSSS 4.1.8 [Electric Shock Treatment]

NK: 4.1.8 is not specified now in Chapter 4.

To MD, Can you review this (1).

- (2) Response in the event of an accident in accordance with JSSS 1.24 [Accident Response Plan].
- (3) Appropriate procedures in the case of accidents arising from contact with or damage to any Overhead Services.

3.2.4 Information to Contractor's Personnel

Prior to the start of work to or in the vicinity of Overhead Services, the Contractor shall instruct relevant Contractor's Personnel of the items listed JSSS 3.1.4 (1) to (6) plus the following:

- (1) Accident training and response measures to an electric shock accident in accordance with JSSS 4.1.8 [Electric Shock Treatment]. (not available)

- (2) Response in the event of an accident in accordance with JSSS 1.24 [Accident Response Plan].
- (3) Appropriate procedures in the case of accidents arising from contact with or damage to any Overhead Services.

3.2.5 Electrical Shock Treatment

<p>comment to above (1). NK: It leaves as it is tentatively.</p>	<p>Refer to JSSS 1.21 [<i>Accident Response Plan</i>].</p>	<p>3.2.5. Electrical Shock Treatment The Contractor shall take the measures prescribed in JSSS 3.1.5 [<i>Electrical Shock Treatment</i>].</p>	<p>The Contractor shall take the measures prescribed in JSSS 3.1.5 [<i>Electrical Shock Treatment</i>].</p>
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