

planking, covering, etc., shall become the property of the Owner as soon as the equipment and material which is contained therein arrives at the Site. The Owner, on application from the Contractor, may permit the Contractor to use some of the boxes, containers, etc., for equipment and material storage purposes until the items are installed or erected by the Contractor.

CC.24. SUPERINTENDENCE

- (a) The Contractor shall keep a competent representative incharge on the premises continuously from the time Works are commenced until the issuance of the Final Acceptance Certificate. The representative shall meet the approval of the Engineer and shall receive and comply with his directions and with the drawings and technical specifications, and shall supervise the work of the workmen or others responsible to the Contractor. He shall also work in harmony with the personnel of the Owner, Engineer and other Contractors at the job site.
- (b) The representative shall not be transferred from the Site without the consent of the Engineer.
- (c) The representative shall carefully examine the Drawings and technical Specifications and acquaint the Engineer with any inconsistency or discrepancy that may appear before proceeding with the Works.
- (d) The Engineer shall be at liberty to object to any representative or person employed by the Contractor who shall misconduct himself or

be incompetent or negligent; the Contractor shall remove any person objected to upon receipt of the Engineer's written request for him to do so and shall provide in his place a competent representative at the Contractor's expense.

- (e) The Engineer may from time to time in writing delegate to the Engineer's Representative any of the power, discretions, functions and/or authorities vested in him and he may at any time revoke any such delegation. This shall also be conveyed to the Contractor.

CC.25. QUALIFICATION OF EMPLOYEES

The Contractor shall employ only competent and skilled workmen fully experienced and capable of performing the duties assigned to them. Any employee who, in the opinion of the Engineer, does not perform his work in a proper and skilled manner, or who is disorderly or otherwise objectionable, shall be discharged and not re-employed on the Works.

CC.26. LABOUR

The rate of pay for local labour at Site shall not be less than prevailing wage scales for similar duties in the locality. The Contractor shall furthermore make all efforts to avoid labour disputes, strikes, go-slows, and similar difficulties which may delay the completion of the Contract.

CC.27. SAFETY FOR WORKMEN AND PUBLIC

- (a) The Contractor shall comply with the "Safety and Engineering

Practices" as set forth in the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, and with all applicable Government safety and sanitary laws, regulations and ordinances, as well as the established safety rules and practices of the Owner. The Contractor shall also provide insurance cover, upto the issuance of the Provisional Acceptance Certificate, under prevailing Workmen's Compensation Laws to the Contractor's workmen (Refer to Clause CC.36). The Contractor shall also insure against the Contractor's liability in respect of any loss or damage / risk occuring while the Contractor is on the site for the of making good a defect during the period of guarantee or for the purpose of completing any outstanding work and against any loss or damage arising during the period of guarantee from a cause occuring prior to issuance of Provisional Acceptance Certificate.

- (b) The Contractor shall provide and properly maintain warning signs and light, barricades, railings and other safeguards for the protection of personnel as required by the conditions and progress of the work. (Refer Clause 13 of Technical General Conditions)
- (c) The Contractor shall furnish and issue approved safety helmets to all workmen and authorized personnel during the course of hazardous construction of all types.
- (d) All accidents shall be promptly reported to the local Chief Inspector of Factories or the Chief Electrical Inspector as the case may be, with copies to the Owner and Engineer.

CC.28. UNEMPLOYMENT COMPENSATION

The Contractor shall accept full and exclusive liability for the payment of contributions or taxes for unemployment insurance, old age benefits, pensions, education cess, annuities, or similar taxes imposed by authorities having jurisdiction which are measured by remunerations paid to the Contractor's employees, and shall comply with and furnish to the Owner all information required by all laws imposing such taxes. Such costs shall be deemed to be included in the Schedule of Prices.

CC.29. FIRST AID AND MEDICAL SUPERVISION

- (a) The Contractor shall accept full liability for the payment of all first aid and medical costs required for workmen under his jurisdiction assigned to the Project.
- (b) The Contractor shall produce certificates of physical fitness of all his employees and he shall employ only such persons as are found to be free from contagious disease. Whenever, in the opinion of the Owner/Engineer, it is necessary for the protection of other personnel, the Contractor shall remove any of his employees found to be suffering from a contagious disease, either to a hospital or permanently from the Site area. Any contagious disease, when discovered, shall be immediately reported to the Owner. The Contractor, if required by the Owner, shall subject all of his employees to regular medical examination and produce satisfactory evidence of their being free from any contagious disease.

CC.30. CARE OF FINISHED WORK

- (a) The Contractor shall effectually protect the work from action of weather and from injury or defacement, and shall cover finished parts where required for their thorough protection. Finished work shall be left perfectly clean and free from defects.
- (b) The Contractor and/or his subcontractors who are installing or erecting equipment, material, etc., shall be responsible for protecting work which has been completed by other contractors. Heavy planking shall be used when moving any equipment over finished floors, grades, etc. Metal rollers will not be permitted.

CC.31. CLEARANCE OF SITE

- (A) The Contractor and any person responsible to him shall, at intervals of not more than 48 hours, remove any rubbish resulting from the execution of their work. If the Contractor fails to remove rubbish within 48 hours after being requested to do so by the Engineer, the rubbish will be removed by others and the cost charged to the Contractor.
- (b) Adjacent streets, roads, and driveways, shall be kept clear and unobstructed at all times. Any materials resulting from demolition and not suitable for use in the construction work will become the property of the Contractor on the Owner's approval and shall be immediately removed from the site. Upon completion, the Contractor shall remove all rubbish, tools, forms, scaffolding, surplus materials, etc. and have the premises clean and fit for use.

- (c) No usable equipment or material purchased for the work, or construction tools and equipment shall be removed from the site without the written consent of the Engineer. After completion of all work required under the Contract any equipment, materials or consumable supplies remaining shall become the property of the Owner except that the Contractor may remove his tools and construction equipment.

CC.32. MONTHLY PROGRESS REPORTS AND PHOTOGRAPHS

- (a) During the period of shop fabrication, equipment suppliers shall submit monthly shop progress reports on forms as approved by the Engineer. Such monthly reports shall show the actual progress completed as of date of the report plotted against the schedule as given in the Contract, and shall be broken down so as to indicate status of purchased materials, detailed shop schedule, shipping dates, etc.
- (b) When installation work commences at the Site, the Engineer shall provide the Contractor with a standard report form which shall be filled in each month and submitted by the Contractor to indicate the progress of construction, and to serve as a basis for making progress payments to the Contractor. The progress indicated on the report each month shall be mutually agreed upon by the Contractor and the Engineer at the Site before it is formally submitted, to avoid delays in making progress payments.
- (c) The Contractor shall further submit, as part of the monthly construction progress report described above, an anticipated

progress schedule indicating the best estimate of the installation work to be performed during the ensuing three-month period.

- (d) The Owner and Engineer reserve the right to coordinate the schedules of the Contractor and other contractors working at the Site, and to adjust and/or change any and all such schedules as required during the course of construction in order to achieve a coordinated project in harmony with the Owner's completion dates.
- (e) Commencing after the first month of construction, and continuing every month until completion, the Contractor shall have photographs taken, where directed by the Engineer's Representative, to show progress of his work and completion of each structure or major feature.
- (f) All progress reports and photographs shall be mailed, or submitted not later than the 15th of the month for the period covering the previous month. Print sizes, number of copies and distribution shall be as called for in the Clause PA.2.

CC.33. SUITABLE APPLIANCES

- (a) The Contractor shall use such methods and appliances for the performance of all portions of the Works as will produce a satisfactory quality of workmanship and rate of progress which, in the opinion of the Engineer, will result in completion of the Contract within the time agreed upon, or within a reasonable time if no time has been agreed upon.
- (b) All materials, tools, construction plant, etc. at the site as

necessary for the execution of the Works shall be held, maintained, and operated entirely at the risk of the Contractor.

CC.34. RESPONSIBILITY OF CONTRACTOR

- (a) The Contractor shall be responsible for all equipment and materials until they are erected or installed in satisfactory condition and accepted by the Owner in writing, except during that time when any equipment and material is taken over and operated by the Owner for the purpose of Commercial Operation, provided said "taking-over" is not necessitated by the Contractor's negligence or non-performance.
- (b) The Contractor shall be responsible for corrections of positions, levels and dimensions of the work according to the drawings notwithstanding that he may have been assisted by the Engineer in setting out the same.
- (c) The Contractor shall at his own expense make good any loss or damage that may occur thereto, except for any damage that may result solely from any of the following events:
 - (1) War or hostilities
 - (2) Nuclear reaction, nuclear radiation, or radioactive contamination.

In case of war, the Contractor shall be responsible for the equipment under Categories 'b' & 'c' under Clause 10 hereof and his staff.

CC.35. COMPLETENESS OF SUPPLY

(a) It is the intent of the technical Specifications to provide for the furnishing, delivery, erection, and testing of the equipment and material specifically noted, shown, or called for. The omission of specific reference to any item of Works that is reasonably necessary for the proper functioning of the Equipment, will not relieve the Contractor of the responsibility to furnish all equipment, materials, transportation, and/or labour required for a completed installation.

(b) The technical Specifications have been prepared with due care and consideration. However, any error or ambiguity shall be reported to the Engineer before starting the work affected. In the event of any dispute arising as to the true intended meaning of the technical Specifications, the Engineer will interpret the same and his interpretation shall be accepted as final and binding upon all parties concerned.

CC.36. DAMAGES AND INSURANCE

(a) The Contractor shall indemnify the Owner and the Engineer against all loss, detriment, damage, costs, charges and expenses, including payments under any prevailing Workmen's Compensation Laws (or similar governmental legislation), which the Owner, Engineer, or Contractor may suffer, sustain or be in any way subjected to by reason of injuries to the Contractor's workmen or other persons directly or indirectly responsible to him, or to the employees of the Owner or Engineer, or to other persons, or by reason of damage

to the property of any person, ownership, corporation or agency arising out of or resulting from the performance of the work of this Contract.

(b) The Contractor shall take out, pay all costs of, and maintain upto the issuance of Provisional Acceptance Certificate, insurance in the following minimum requirements in United States dollars or equivalent.

(1) Erection All Risk Insurance covering interests of Contractor, Owner and all subcontractors for 150% of C&F value and cost for erection and commissioning of the Contract. This shall include insurance of all equipment and material.

(2) Public Liability and Property Damage Insurance covering all operations under the Contract. Limits for bodily injury or death shall be not less than Pak. Rs.200,000 for each person and Pak. Rs.700,000 for each accident, and for property damage not less than US\$300,000 for each accident.

(3) Automobile Liability Insurance on all self-propelled vehicles used in connection with the Contract works whether owned, non-owned or hired by the Contractor. Limits for bodily injury or death shall be not less than US\$100,000 for each person and US\$300,000 for each accident, and for property damage not less than US\$100,000 for each accident.

For purpose of insurance, the Contractor shall take out the insurances under this Contract only with the National Insurance Corporation, Abbasi Shaheed Road, (Gora Kabrastan), Off Shahra-e-

Faisal, Karachi, Pakistan).

The Contractor shall ensure and provide to Owner's approval an insurance cover against all risks from the time of despatch of Equipment from his factory upto the Provisional Acceptance which has a provision of full Guarantee Endorsement for the period from the Provisional Taking Over to Final Completion Clause CC.58 by the Owner.

- (c) The Owner shall have the right at any time to require insurance coverage limits greater than those specified hereof. In such event, the additional premium payable solely as the result of such increase in insurance will be added to the Contract price.
- (d) The Contractor shall submit a certificate from the Contractor's insurance company covering each type of insurance the Contractor is required to provide. Each certificate shall state that no policy will be cancelled before the Owner and the Engineer have been given thirty (30) calendar days notice of the Contractor's intention to cancel such policy and assurance that a new policy in lieu shall be in force before cancellation of the previous policy. The Contractor shall name the Owner and the Engineer in each policy, in addition to himself as the insured.

CC.37. FORCE MAJEURE

Force majeure may be considered if the Contractor be obstructed or delayed in the commencement, prosecution of completion of his work by any necessary or unavoidable act or delay of the Owner, or unavoidable

acts or delays on the part of railroad or steamship lines or any other transportation company in transporting material consigned to the Contractor for a period exceeding one month, or by riot, insurrection, war directly affecting the project, blockade, revolution, civil commotion, pestilence, acts of public authorities, fire, explosion, lightning, earthquake, cyclone, tidal waves, typhoons, hurricanes, tornadoes, floods, plague, epidemics, quarantine, or similar cause not caused by and beyond the control of the Contractor. If in the opinion of Engineer, the completion dates are delayed by force majeure, the Contract dates will be extended for a period equivalent to the time said work as a whole has been delayed for force majeure, provided that within fourteen (14) days the Contractor submits to the Owner through the Engineer for approval a notice in writing stating the force majeure case and stating in detail the reason for each delay of completion caused by force majeure. The Contractor shall provide full evidence for the delay of completion due to force majeure. However, for delays by the Contractor or his subcontractors which result directly or indirectly from his negligence, mistakes, improper cooperation or failure to supply full information, the Contract dates will not be extended.

In case of continued suspension lasting for more than 90 days, the Owner and the Contractor shall mutually discuss the counter-measures to be adopted including further suspension/termination etc.

CC.38. Not used.

CC.39. NEGLIGENCE AND DEFAULT

- (a) If the Contractor shall neglect to execute the Works expeditiously and with due diligence, or shall refuse or neglect to comply with any orders given to him in writing by the Engineer in connection with the Works, or shall refuse to abide by the provisions of the Contract, the Owner shall give notice to him in writing calling upon him to make good the failure, neglect or refusal cited.
- (b) Should the Contractor fail to respond with such notice within three (3) days after receipt of the same, the Owner will be at liberty to take the Works wholly, or in part, out of the Contractor's hands and carry out the work either by himself or through his agents, or at his option may re-contract the said work with any other persons to execute the work or any part thereof and provide any Contractor's equipment, materials, tools, tackle or labour for the purpose of completing the Contract.
- (c) In such an event the Owner shall, without being responsible to the Contractor for normal wear and tear of the same, be entitled to seize and take possession and have free use of all Contractor's equipment materials, tools, tackle or other items which may be on the Site, for use in connection with execution of such work, to the exclusion of any right of the Contractor over the same.
- (d) The Owner shall be entitled to retain and apply any balance which may otherwise be then due to the Contractor under the Contract, or such part thereof as may be necessary, to the payment of the cost of execution of such aforesaid work.

(e) If the cost of executing the aforesaid work exceeds the balance due to the Contractor and the Contractor fails to make good the defect, said equipment, materials, tools, tackle, or other property of the Contractor as may not have been used up in completion of the work, may be sold by the Owner and the proceeds applied towards the payment of such difference and the costs incidental to such sale. Any surplus balance existing after crediting the proceeds of such sale will be paid to the Contractor and the remaining unsold items, if any, shall be removed by the Contractor. If the proceeds of the above sale of the Contractor's equipment, materials, tools, tackle and other items are insufficient to cover the cost of executing the aforesaid work, the balance remaining after crediting the proceeds of such sale will be recoverable from the Contractor by action of law.

CC.40. REJECTION AND INTERIM OPERATION

(a) If the completed project, or any portion thereof, fails to fulfill the requirements of the Contract, the Engineer shall give the Contractor written notice setting forth particulars of such defects or failure and the Contractor shall rectify the defects, or alter the work to make it comply with the requirements of the Contract. Should he fail to do so within a reasonable time, the Owner may at his option replace at the Contractor's expense the whole or any portion of the work which is defective or fails to fulfill the Contract. Such replacement will be carried out by the Owner at the Contractor's risk and expense, and where possible to the same Specifications. The Contractor's full liability under this Clause

shall be satisfied by the payment to the Owner of the original Contract price including the difference, if any, between the replacement price of equipment and materials including charges for transportation, installation and testing, and the original Contract price including the same defective equipment, materials, and charges.

- (b) In the event of such replacement, modifications or repair during the period when the necessary replacement equipment is being obtained, or repairs or alterations are being made, the Owner shall have the right to operate any and all equipment as soon as and as long as it is in operating condition, whether or not such equipment has been accepted as complete and satisfactory, except that this shall not be construed to permit operation of any equipment which may become damaged by such operation before any required replacements, repairs and/or alterations have been made. All replacements, repairs, or alterations required of the Contractor shall be made by the Contractor at such times as directed by the Owner and in such a manner as will cause the minimum interruption in the use of the equipment by the Owner. Should the Owner under his option not replace the defective equipment within a reasonable time, the Contractor's full responsibility under this Clause shall be satisfied by the repayment of all moneys paid by the Owner to him in respect of said equipment.
- (c) Immediately after the replacement of the defective equipment the Contractor shall remove said defective equipment from the site without cost to the Owner.

(d) Nothing in this Clause shall be deemed to deprive the Owner of or affect any rights under this Contract which he may otherwise have in respect of such defects or deficiencies, or in any way relieve the Contractor of his Contract obligations.

CC.41. WORK UNDER PROTEST

If the Contractor objects to instructions or decisions of the Engineer, he shall comply with them promptly and fully, but such compliance by the Contractor shall not in any way jeopardize his other Contract rights. The Contractor shall file with the Engineer his written objections and the reasons therefor within fourteen (14) days of receipt of the disputed instructions or decisions.

CC.42. WITHHOLDING PAYMENT

(a) The Owner may withhold the whole or part of any payment due to the Contractor, which in the opinion of the Owner is necessary to protect himself from loss on account of:

- (1) Defective work not remedied.
- (2) Guarantee not met
- (3) Claims filed against Contractor.
- (4) Failure of Contractor to make payments due for material or labour employed by him.
- (5) Damage to any other contractor.
- (6) Contractor's non-compliance with the Contract.

(b) When the Conditions for withholding the payment are removed,

payments of the amount due to the Contractor will be made by the Owner without delay.

CC.43. PAYMENT DEDUCTIONS

All costs, damages or expenses which the Owner shall have paid, for which, under this Contract, the Contractor is liable, may be deducted by the Owner from any moneys due or becoming due to the Contractor from the Owner.

1-133

CC.44. FINAL PAYMENT DOCUMENTS

The Contractor shall execute and deliver to the Owner the following documents before receiving final payment:

- (a) Undertaking by Contractor for Issuance of Provisional Taking Over Certificate
- (b) Affidavit of Contractor
- (c) Final Completion Certificate
- (d) Release of Lien

In addition, the Contractor shall submit copy of the Provisional Taking Over Certificate.

Blank forms of these are attached hereto as Exhibits C.1, C.2, D and F respectively.

The Contractor's receipt of final payment shall automatically constitute the full transfer of title of all equipment and material from the Contractor to the Owner.

CC.45. ARBITRATION

If any dispute, question or controversy shall arise between the Owner and the Contractor concerning this Contract which is not specifically provided for herein, the matter in dispute shall be referred to two Arbitrators, one to be nominated by the Owner and the other by the Contractor, or in the case of disagreement between the Arbitrators, to an Umpire appointed by the Arbitrators prior to their deliberations. Should the Arbitrators fail after two (2) months to resolve the matter or matters of difference, the whole matter or matters, as the case may

1-134

be, shall be referred to the Umpire.

The decision of the Arbitrators or Umpire shall be final and binding on both the Owner and the Contractor. Any such reference shall conform to the rules of conciliation and arbitration of the International Chamber of Commerce. The assessment of costs incidental to the reference and award respectively shall be at the discretion of the Arbitrators or, in the event of their not agreeing, of the Umpire appointed by them.

Work under this contract notwithstanding, existence of any such dispute, question or controversy, shall continue and the arbitration proceedings will commence only on completion of whole of the Works.

Arbitration shall be carried out in accordance with the rules of conciliation and arbitration of the International Chamber of Commerce. The venue of arbitration shall be Karachi, Pakistan.

CC.46. CONTRACT VARIATIONS

The Contract shall not be capable of being varied except in writing, signed by both parties and the Owner shall not, in the absence of his specific written acceptance, be bound by any provisions, variations, deviations or exceptions in the Contractor's proposals, offerings, forms of acknowledgement of Contract, invoice packing lists or any other document which purports to impose conditions at variance with or supplemental to these documents.

CC.47. LIENS

The Contractor for himself and for any persons directly or indirectly responsible to him, and for his or their materials, equipment and employees, and for all other persons performing any labour or furnishing any labour or materials for any of the work covered by his Contract, will be required to release or waive, to the full extent permitted by law, all mechanical or other liens, for or on account of the work done or equipment and materials furnished hereunder, and the improvements or structures wherein same may be incorporated, and the land to which they are appurtenant shall at all times be free and clear of all such liens.

CC.48. INTERPRETATION

- (a) Decisions by the Engineer shall be conclusive as to the true intent and meaning of the Engineer's Drawings and technical Specifications. Any discrepancy which may exist between Drawings and the technical Specifications shall be referred to the Engineer, whose decision as to the true meaning shall be final.
- (b) The Contractor shall study and compare the Drawings, technical Specifications and other information given to him by the Engineer. He shall also examine the figures and dimensions, and shall report in writing to the Engineer any discrepancies, inconsistencies, or omissions of statement regarding materials and methods of construction which he notes.
- (c) All Drawings and technical Specifications, being instruments of service, are the property of the Engineer and shall be returned to

him when the work is completed.

- (d) Verbal instructions or information purported to have come from the Engineer's office will not be recognized by him unless confirmed in writing.
- (e) The Drawings and technical Specifications are intended to be complementary to each other so that any items set forth in either shall be recognized as if duly set forth in both.

CC.49. COORDINATION MEETINGS

- (a) Soon after the award of the Contract to the Contractor, the Owner and the Engineer will require a meeting with the Contractor at the Owner's or Engineer's office to discuss scheduling of drawings, equipment manufacture and installation, and other similar problems which may be pertinent to the completion of the project. The Contractor's project engineer who will be responsible for prosecution of the work at the factory shall be present at this meeting.
- (b) The equipment manufacturer of the Contractor shall allow for an adequate number of coordination meetings in the Owner's or Engineer's office in Pakistan during the course of equipment design and fabrication to ensure good communication with the Engineer and prevent delays in the schedule. The factory project engineer or such other engineers as may be required shall be present at these meetings.

187

CC.50. LANGUAGE

- (a) The official language for general correspondence technical information and data, instruction manuals literature, pamphlets, drawings, standards and test data shall be exclusively English. All markings on equipment, dials, nameplates and other items shall also be in legible English. Shipping marks, addresses and instructions on individual packages shall be printed in capital letters in English only.
- (b) The Contractor shall be bound to replace any item containing markings other than English without additional cost to the Owner.

CC.51. INSPECTION, TESTING AND REJECTION

- (a) The Owner/Engineer shall be entitled at all reasonable times during manufacture to inspect, examine, and test on the Contractor's premises the materials and workmanship and performance of all plant to be supplied under the Contract, and if part of the said plant is being manufactured on other premises the Contractor shall obtain for the Owner/Engineer permission to inspect, examine, and test as if the said plant were being manufactured on the Contractor's premises. The expenses to be incurred for all shop inspection shall be borne by the Contractor. Such inspection, examination or testing shall not relieve the Contractor from any obligation or responsibility under the Contract.
- (b) The Contractor shall, after consulting the Owner/Engineer, give the Owner/Engineer thirty (30) days notice in writing of the date

on and the place at which any plant will be ready for testing as provided in the Contract and unless the Owner/Engineer shall notify his inability to attend the said test at the place so named on the date which the Contractor has stated in his notice the Contractor may proceed with the tests, which shall be deemed to have been made in the Owner/Engineer's presence and shall forthwith forward to the Owner/Engineer duly certified copies of the test reports.

- (c) Where the Contract provides for tests on the premises of the Contractor or of any sub-contractor the Contractor except where otherwise specified, shall provide free of charge such assistance as labour, materials, electricity, fuel, stores, apparatus, and instruments as may be requisite and as may be reasonably demanded and approved by the Owner and the Engineer to carry out such tests efficiently. The Contractor shall bear all expenses of the Owner/Engineer.
- (d) If any item fails to pass the test or if the test cannot be witnessed by the Owner/Engineer upon their arrival at the workshops due to the faults of the Contractor, and if for such reasons the postponement or repetition of the test is required, the Contractor shall bear all additional costs of the test repetition as well as the additional expenses of the Owner/Engineer.
- (e) Where the Contract provides for tests on the Site, the Owner, except where otherwise specified, shall provide electricity, fuel and water, as may be requisite and as may be reasonably demanded to carry out such tests efficiently.

- (f) As and when the Owner/Engineer is satisfied that any plant shall have passed the tests referred to in this clause the Owner/Engineer shall notify the Contractor in writing to that effect.
- (g) If after inspecting, examining, or testing any plant the Owner/Engineer shall decide that such plant or any part thereof is defective or not in accordance with the Contract, he may reject the said plant or part thereof by giving to the Contractor within a reasonable time notice in writing of such rejection, stating therein the grounds upon which the said decision is based.
- (h) The provisions of C.C.52 (Startup, Trial Operation and Performance) shall relate also to inspections, examinations, and tests carried out under this Clause.
- (i) Correction factor curves for the equipment shall be submitted as a part of the test procedure. Such curves will be used, if necessary, for variations in test conditions from the normal stipulated conditions. The correction curves shall cover the complete ranges of variation that may be encountered.
- (j) A final report shall be prepared and submitted by the Contractor for approval by the Owner/Engineer. The report format shall have prior approval by the Engineer.
- (k) The Contractor shall provide sufficient and skilled supervisory staff and service engineers to perform all tests. The Contractor shall show the period during which the performance and acceptance tests shall be performed on his progress schedule.

- (l) The Owner reserves the right to postpone or otherwise reschedule tests due to system load requirements, in which case the Contractor will be given a time extension to the contractual completion date. However, except in the case of "Force Majeure," the Performance and Acceptance Tests shall be completed within three (3) months after the successful completion of the Continuous Operation Test.
- (m) The codes as specified in the Contract documents shall be regarded as the source of reference for definitions, methods of measurements, and required test/inspection procedures.

CC.52. STARTUP, TRIAL OPERATION AND PERFORMANCE TEST

CC.52.1 GENERAL

- (a) The Contractor shall give to the Owner/Engineer in writing thirty (30) days notice of the date after which he will be ready to make the tests on completion. Unless otherwise agreed, the tests shall take place within ten (10) days after the said date, on such day or days as the Engineer shall in writing notify the Contractor.
- (b) The Owner, except where otherwise specified, shall provide free of charge electricity as may be requisite and as may be reasonably demanded to carry out such tests efficiently. However, all the test equipment, calibration devices, standard or nonstandard special test instruments, stores, apparatus, etc., required to conduct all the tests would be provided, arranged, and installed by the Contractor at his own cost and expense. The Contractor will pay all expenses including the custom duties etc., on the import or export of all such instruments, etc.

- (c) If any portion of the Works fail to pass the tests, tests of the said portion shall be repeated by the Contractor within a reasonable time upon the same terms and conditions, provided that all reasonable expenses to which the Owner may be put by the repetition of the tests shall be deducted from the Contract Price.
- (d) Where the conditions of this Clause are at variance with the requirements of the Specification, the Specification shall take precedence.
- (e) The Contractor shall submit one (1) copy of the results of each of the tests conducted at the Site to the resident Engineer within one (1) week of the tests being carried out. Four (4) copies of the certified results of each of the tests at the Site in the form of test reports or test certificates shall be provided to the Engineer within one (1) month of the tests being carried out.
- (f) All Field Tests consistent with standard industry practices, including material tests, tightness, alignment, balance, visual, electrical, and mechanical operational checks, calibrations, etc., shall be witnessed by the Owner/Engineer.
- (g) The Contractor shall be responsible for operation during the period commencing with initial startup test for each equipment and extending through trial operation and all performance tests.
- The Contractor shall also be responsible for twelve (12) months operation and maintenance after the issuance of Provisional Taking Over Certificate.

- (h) The time consumed in startup and trial operation shall be considered as a part of the erection and installation period.
- (i) The Contractor shall prepare the test procedures and submit them to the Owner and the Engineer for approval thirty (30) days before each test.

CC.52.2 TRIAL OPERATION AND PERFORMANCE TEST

The following field inspections and tests will be carried out in the sequence detailed below, and the successful performance and completion of all the tests taken together shall constitute the Owner's acceptance tests.

(a) Inspection and Checking of Equipment

After completion of erection and/or installation, and before being put into operation, each equipment and all facilities such as towers, insulator strings and all other electrical and mechanical equipment shall be thoroughly cleaned and then inspected under the supervision of the Owner/Engineer for correctness and completeness of installation and acceptability for placing in operation. The time consumed in the inspection and checking of each equipment and auxiliaries shall be considered as a part of the erection and installation period.

(b) Startup and Trial Operation

After satisfactory completion of the inspection and checking of equipment, each equipment will be placed in the startup and trial

1-143

operation test i.e., megger test, no load test, and necessary adjustments, repairs etc., will be made as required.

(c) Continuous Operation Test/Performance Test

After the trial operation test have been completed, thirty (30) days continuous operation tests shall be run to determine whether the equipment complies with the guarantees.

Upon the completion of continuous operation test, performance test will be deemed to be completed.

(d) Provisional Taking Over

The Provisional taking over will be forthcoming only after all other works called for in the Contract have been satisfactorily completed.

In the event that defects necessitate the rejection of the equipment or any part thereof and the equipment is reasonably capable of being used, the Owner shall have the right to operate the equipment until such time as new equipment is provided to replace the rejected equipment. Such operation shall not be deemed as taking over.

(e) Guarantee Period

The guarantee period shall start from date of the Provisional Taking Over Certificate and shall last for one (1) year from this date.

(f) Final Completion Certificate

The Final Completion Certificate will be issued after the expiration of the Guarantee period.

CC.53. PERFORMANCE GUARANTEES AND LIQUIDATED DAMAGES

- (a) If the equipment is unable to ultimately meet its performance guarantees, as set forth by the Contractor in the Contract after he has taken all steps to correct the deficiencies, the Contractor will be assessed liquidated Damages in accordance with individual Sections of the Specifications.
- (b) Liquidated damage payments shall be made in both the currency of country of origin and Pakistani rupees in the ratio of the various amounts of such currencies involved in the Contract (at the time of signing the Contract) including all equipment and material, marine transportation and erection and commissioning costs. The total performance-guarantee liquidated damages will be limited to a maximum of ten (10) percent of the Contract Price.

CC.54. LIQUIDATED DAMAGES, DELAY IN COMPLETION

- (a) Time is of the essence in this Contract and, as such, progressive completion of the Contract by the dates mentioned in the Tender Documents, or by the dates mutually agreed upon at the time of signing of the Contract or such extended dates as may be allowed under the Contract shall be binding upon the Contractor.

(b) Delay in Completion of the Works

In the event the Contractor fails to complete the Work in conformity with the agreed schedule (date of Taking Over), the Contractor shall pay the Owner as liquidated damages and not as penalty, a sum of 0.1 percent of the Contract Price for each and every day, including holidays, by which the continuous operation test and performance test are delayed. The total liquidated damages on account of delay in completion shall be limited to ten (10) percent of the Contract Price. The Owner may without prejudice to any other method of recovery deduct the amount of such damage from any money due or which becomes due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from the obligation to complete the Works or from any other of his obligations or liabilities under the Contract. Liquidated damages shall be payable in both currencies of country of origin and Pakistani Rupee in ratio of various amounts of such currencies involved in the applicable Contracts.

CC.55. LIABILITY, LIABILITIES, INDEMNITIES FOR ACCIDENTS AND DAMAGES

(a) The Contractor shall properly cover up and protect until taken over under CC.57 (Provisional Taking Over) any section or portion of the Works liable to injury by exposure to the weather, and shall take every reasonable precaution to protect any section or portion of the Works not taken over against loss or damage from any cause.

- (b) In the case of loss of or damage to the Works on the Site arising from or occasioned by causes for which the Contractor is not responsible under the Contract, the same shall, if required by the Owner, be made good by the Contractor but at the cost of the Owner, at a price to be agreed between the Contractor and the Owner or in default of agreement to be settled by arbitration and such cost shall be added to the Contract Price.
- (c) Subject to subclause (d) of this Clause and CC-56 (Limitations of Contractor's Liability), all losses of and damage to any section or portion of the Works that shall not have been taken over under CC-57 (Provisional Taking Over) which shall arise from or be occasioned by an act of the Contractor or any of his subcontractors or by a failure of the Contractor to comply with any obligation imposed on him by subclause (a) of this Clause, shall be made good by and at the sole cost of the Contractor and to the reasonable satisfaction of the Engineer.
- (d) The Contractor shall, subject to Clause CC-56 (Limitation on Contractor's Liability), indemnify the Owner/Engineer in respect of any damage or injury occurring before all the Works shall have been taken over under CC-57 (Provisional Taking Over) to any person or to any property (other than property forming part of the Works not yet taken over) and against all actions, suits, claims, demands, costs, charges, and expenses arising in connection therewith which shall be occasioned by the negligence of or breach of statutory duty by the Contractor

or any of his subcontractors, or by defective design (other than a design made, furnished, or specified by the Owner, and for which the Contractor has disclaimed responsibility in writing within a reasonable time after the receipt of the Owner's instructions), materials or workmanship, or by way of damages or compensation payable at Law in respect of or in consequence of any accident or injury to any workman or other person in the employment of the Contractor or any of his subcontractors, but not otherwise provided that the Contractor shall not be liable by virtue of the subclause in respect of damage or injury attributable to defects in any section or portion of the Works taken over under CC-57.

(e) If while the Contractor is on the Site for the purpose of making good a defect pursuant to CC18.2 (Defects after Taking Over) or for the purpose of carrying out tests on completion during the period referred to in CC-52 and CC-57, and of these should occur any loss of or damage or injury to the Works or to any other property or to any person, the Contractor shall be liable for the said losses, damage, or injury in respect thereof.

(f) The Contractor shall not be liable to the Owner for:

i) Any damage or injury to the extent that it is caused by or arises from the acts or omissions of the Owner or of others (not being the Contractor's servants or subcontractor).

ii) Any loss or damage in circumstances over which the Contractor has no control, as per provision of CC-37 (Force Majeure).

(g) In the event of any claim made against the Owner arising out of the matters referred to in and in respect of which the Contractor may be liable under this Clause, the Contractor shall be promptly notified thereof, and may at his own expense conduct all negotiations for the settlement of the same and any litigation that may arise therefrom. The Owner shall not, unless and until the Contractor shall have failed to take over the conduct of the negotiations or litigation, make any admission which might be prejudicial thereto. The conduct by the Contractor of such negotiations or litigation shall be conditional upon the Contractor having first given to the Owner such security as shall from time to time be required by the Owner to cover the amount ascertained or agreed or estimated, as the case may be of any compensation, damages, expenses, and costs for which the Owner may become liable. The Owner shall, at the request of the Contractor, afford all available assistance for any such purpose and shall be repaid any out-of-pocket expenses incurred in so doing.

(h) The Contractor shall indemnify and keep indemnified the Owner and the Engineer against all damages and compensation payable at law in respect of or in consequence of any accident or injury to any workmen or other person in the employment of the Contractor or any of his subcontractors except an accident

or injury resulting from any act or default of the Owners, the Engineer, or their agents or servants, and against all claims, demands, proceedings, costs, charges, and expenses, whatsoever, in respect hereof or in relation thereto.

CC.56. LIMITATIONS OF CONTRACTOR'S LIABILITY

Subject as provided in CC.54 (Liquidated Damages, Delay in Completion) for the deduction of liquidated damages for delay, the Contractor shall not be liable to the Owner by way of indemnity or by reason of any breach of the Contract for loss of use (whether complete or partial) of the Works or of profit or of any Contractor loss that may be suffered by the Owner. Similarly, the Owner and the Engineer shall not be liable to the Contractor under the Contract for such named damages.

Except in respect of personal injury or damage to property conferring on a person other than the Owner, the liability of the Contractor shall not exceed the Contract Price.

CC.57. PROVISIONAL TAKING OVER

- (a) As soon as the Works have been completed in accordance with the Contract, (except in minor respects that do not effect their use for the purpose for which they are intended and save for the obligations of the Contractor under CC.18.2 (Defects after Taking Over) have passed the Tests on Completion and have satisfactorily completed the thirty (30) days continuous uninterrupted Operation Test and Performance Test as per provi

1-150

sions of CC.52, the Engineer shall issue a certificate (herein called a "Provisional Taking Over Certificate"), in which he shall certify the date on which the works have been so completed, have passed the said tests and have completed the thirty (30) days continuous operation test and the performance test, and the Owner shall be deemed to have provisionally taken over the Works on the date so certified, but the issue of taking over certificate shall not operate as an admission that the Works have been completed in every respect.

- (b) Should the equipment furnished by the Contractor fail to operate as required, or in case of failure to meet any of its guarantees, the Owner shall have the right to operate the equipment, using the Contractor's supervisory operating personnel, until such defects have been remedied and guarantees verified. In the event that defects necessitate the rejection of the equipment or any part thereof, the Owner shall have the right to operate the equipment until such time a new equipment is provided to replace the rejected equipment. Such operation shall not be deemed an acceptable of any equipment.

(c) Interference with Tests

If by reason of any act or omission of the Owner or the Engineer, or some other contractor employed by the Owner, the Contractor shall be prevented from carrying out the Tests on Completion as provided in CC-52 hereof (Startup, Trial Operation and Performance Test), unless in the meantime the Works shall have been proved not to be substantially completed

1-15/

in accordance with the Contract, the Owner shall be deemed to have taken over the Works, and the Engineer shall issue a Provisional Taking Over Certificate accordingly; nevertheless the Contractor shall make the said tests during the period referred to in the CC-52, hereof as and when required by the Engineer by ten (10) days notice in writing, and clause CC-51 hereof (Inspection, Testing and Rejection) shall apply.

CC.58. FINAL COMPLETION CERTIFICATE

- (a) No certificate other than the Final Completion Certificate referred to in subclause (b) of this Clause shall be deemed to constitute approval of any work or other matter in respect of which it is issued, or shall be taken as an admission of the due performance of the Contract or any part thereof, or of the accuracy of any claim or demand made by the Contractor, or of additional or varied work having been ordered by the Engineer, nor shall any other certificate conclude or prejudice any of the powers of the Engineer.
- (b) The Contract shall not be considered as completed until a Final Completion Certificate shall have been signed by the Engineer and delivered to the Owner stating that the Works have been finally completed to his satisfaction. The Final Completion Certificate with the Engineer's countersignature shall be given by the Owner, twenty eight (28) days after the expiration of the Guarantee period (or if different Maintenance periods shall become applicable to different parts of the Work, the

expiration of the latest of such periods) or as soon thereafter as any Works due to be made good pursuant to CC.19 hereof shall have been completed to the satisfaction of the Engineer. The Owner shall be deemed to have finally accepted the Works on the date so certified.

CC.59. TERMS OF PAYMENT

The Contractor shall be paid for equipment, material and services in the same currency as quoted by him in Appendix A, Section II, Volume I.

Payment for the Contract Price will be made as follows:

(a) For Imported Equipment & Material - FOB

10% (Ten percent) Advance payment within ninety days after signing of the Contract Agreement and upon submission of an acceptable Bank Guarantee of equivalent amount in favour of the Owner to secure the advance payment.

70% (Seventy percent) Pro-rata on shipment and upon submission of shipping documents in accordance with Clause CC.62 of the Conditions of Contract.

10% (Ten percent) Pro-rata upon arrival at the Site of every shipment and upon submission of receiving and/or damage report

1-153

countersigned by the Engineer.

10% (Ten percent)

Final payment; upon Provisional Taking Over Certificate for the Unit and upon submission of one certified copy of the documents in accordance with Clause CC.44 of the Conditions of Contract.

(b) For Marine Transport

100% (Hundred percent)

Pro-rata upon submission of invoices and supporting documents payable at actual cost of Marine Transport and subject to the maximum ceiling allowed in the Contract Price.

(c) For Insurance

100% (Hundred percent)

Pro-rata upon submission of invoices and supporting documents

(d) For Indigenous Equipment and Material

10% (Ten percent)

Advance payment, within sixty (60) days after issuance of Notice of Award by the Owner and upon submission of required Performance Bond and an acceptable Bank Guarantee of equivalent amount.

751-1

80% (Eighty per- cent) Pro-rata upon arrival at the Site and upon submission of receiving and/or damage report, countersigned by the Engineer.

10% (Ten percent) Final payment, upon Provisional Taking Over Certificate of the Unit and upon submission of one certified copy of the documents in accordance with Clause CC.44 of the Condition of the Contract.

(e) For Erection and Commissioning

10% (Ten percent) Advance payment; upon shipment of imported Equipment and Material amounting to 20% of the FOB value of the Contract. This payment will be released upon submission of an acceptable Bank Guarantee of equivalent amount.

80% (Eighty per- cent) Upon submission of monthly invoices.

10% (Ten percent) Final payment; upon Provisional Taking Over Certificate of the Unit and upon submission of one certified copy of the documents in accordance with Clause CC.44 of the Conditions of

1-155

Contract.

(f) For Unloading, Loading and Transportation
from Port to Site

100% (Hundred
percent)

Pro-rata upon receipt of imported
Equipment & Material at the Site,
of each shipment payable in propor-
tion to the relation of transported
FOB value of that shipment to total
FOB Value of the Contract and upon
submission of receiving and/or damage
report countersigned by the Engineer.

(g) For civil and architectural works

10% (Ten percent)

Advance payment; upon signing of the
Contract Agreement and within two (2)
months of the fulfillment of financing
formalities, against submission of
Performance bond and Advance payment
guarantee on the forms attached to the
Tender Document from a surety or
sureties approved by the Owner.

80% (Eighty per-
cent)

Upon submission of monthly invoices.

10% (Ten percent)

Final payment; upon Provisional Taking
Over certificate of the works and upon
submission of one certified copy of

951-1

the documents in accordance with
Clause CC.44 of the Condition of
Contract.

Notes: (1) All Bank Guarantees of foreign banks shall
be counterguaranteed by a scheduled Bank of
Pakistan.

(2) The Advance Payment Bank Guarantee mentioned above
will be reduced pro-rata the value of each
shipment and of monthly progress.

(3) No payment shall be made prior to acceptance by
the Owner of the Performance Bond.

(4) The form of Bank Guarantee for Advance payment is
attached herewith as Exhibit 'G'.

CC.60. MODE OF PAYMENT

- (a) Separate invoices for payments shall be submitted for foreign
and local currency to the Engineer.
- (b) The Engineer shall, within 21 days of receipt of invoices for
payment from the Contractor, either forward to the Owner the
invoices duly certified as required under Terms of Payment, or
return to the Contractor indicating the reasons for which it is not
being certified.
- (c) The foreign exchange component of the Contract Price will be paid
out of an irrevocable and divisible Letter of Credit to be

established in favour of the Contractor after observing the formalities of the source of financing.

- (d) All local currency payments will be made to the Contractor directly by the Owner. The invoices will be processed and paid within 30 days of receipt of certified invoices by the Owner from the Engineer.

CC.61. COST ACCOUNT BREAKDOWN

Before completion of the Project, the Contractor shall submit a complete Cost Account Statement of all work performed hereunder, broken down in such detail and using such cost account code as the Owner may direct.

CC.62. SHIPPING PAPERS

The Contractor shall submit full shipping documents via air mail by registered post to the Owner, preferably in two separate registered covers. All shipping documents shall be air mailed within a week after the ship has sailed so as to reach the Owner in advance of the arrival of the ship. Responsibility for delay in the receipt of shipping documents shall rest with the Contractor, who shall pay all demurrage and port storage charges accruing as a result of late receipt of shipping documents. The shipping documents shall be sent as follows:

| | <u>For the Owner</u> | | <u>For the Engineer</u> | |
|-------------------------|---|--|-------------------------|-------------|
| | <u>First Reg- istered Cover</u> | <u>Second Regis- tered Cover</u> | <u>Head Office</u> | <u>Site</u> |
| Payment invoice | 6 | 6 | 2 | 2 |
| Packing list | 6 | 6 | 2 | 2 |
| Original B/L | 2 | 1 | - | - |
| Non-negotiable B/L | 3 | 3 | 1 | 1 |
| Certificate of Origin | 3 | 3 | 1 | 1 |
| Insurance declaration | 3 | 3 | 1 | 1 |
| Certificate of Flagship | 3 | 3 | 1 | 1 |

CC.63. RECEIVING AND/OR DAMAGE REPORTS

(a) The Contractor shall prepare and submit receiving reports to the Owner and the Engineer to cover each individual shipment received and checked at Site.

Each shipment on arrival at Site shall be unloaded, opened, and carefully checked by the Contractor in the presence of a designated representative of the Engineer for any damage in transit. In the event of damage, the Contractor shall immediately submit a damage report, countersigned by the Engineer, to the Insurance Company with copies to the Owner and Engineer. Prompt action shall be taken and intimated to the Owner and Engineer, to reorder the damaged or missing items and it shall be ensured that deliveries meet the final guaranteed commissioning dates.

(b) In all cases of irreparable damage, the Contractor shall immediately notify the manufacturer for re-manufacture and supply

1-157

of the damaged part(s).

CC.64. MISCELLANEOUS DOCUMENTS DISTRIBUTION

(a) In addition to the number, type and distribution of documents called for under various Clauses of the Specifications, the following document distribution shall be followed by the Contractor:

| | <u>For the Owner</u> | | <u>For the Engineer</u> | | <u>Regis-</u> | <u>Total</u> |
|-------------------------|----------------------|-----------------|-------------------------|-----------------|-----------------------|--------------|
| | <u>Office</u> | <u>Job Site</u> | <u>H.O.</u> | <u>Job Site</u> | <u>tered Surveyor</u> | |
| Correspondence* | 5 | - | 3 | 2 | - | 10 |
| Insurance certificates | 2 | - | 1 | 1 | - | 4 |
| Progress reports | 3 | 1 | 2 | 1 | - | 7 |
| Progress photos | 3 | 1 | 1 | 1 | - | 6 |
| Progress photo negative | 1 | - | - | - | - | 1 |
| Certified test reports | 3 | 1 | 1 | 1 | - | 6 |
| Receiving reports | 8 | 1 | 1 | 1 | - | 11 |
| Damage reports | 8 | 1 | 2 | 1 | 1 | 13 |
| List of spare parts | 5 | - | 2 | 1 | - | 8 |
| List of lubricants | 5 | 1 | 1 | 1 | - | 8 |
| List of tools | 5 | 1 | 1 | 1 | - | 8 |

* Including all attachments

(b) All documents shall be posted via air mail/courier. Cables shall be confirmed immediately by an air mail counterpart. All letters shall

1-160

be numbered using a numbering system as instructed by the Engineer.

All correspondence in connection with equipment and materials provided herein and their erection shall be addressed to the Engineer's Offices.

CC.65. EXTENSION OF TIME FOR COMPLETION

If by reason of any Variation Order or any cause beyond the control of the Manufacturer the Manufacturer shall have been delayed or impeded or prevented either by the Owner or Engineer or otherwise howsoever in the completion of the Works or any part thereof whether such delay or impediment or prevention occurred before or after the time or extended time fixed for completion (provided that the Manufacturer shall without delay have given to the Engineer notice in writing containing full and detailed particulars of his claims for an extension of time) the Engineer shall on receipt of such notice (but not otherwise) grant the Manufacturer from time to time in writing either prospectively or retrospectively such extension of the time fixed by the Contract for the completion of the Works or such part thereof as may be deemed reasonable by the Engineer.

EXHIBIT-A

FORM OF AGREEMENT

THIS AGREEMENT, made this _____ day of _____ 199_ between
KARACHI ELECTRIC SUPPLY CORPORATION (hereinafter called the "Owner") of
the one part and

(hereinafter called the "Contractor") of the other part.

WITNESSETH that:

WHEREAS, Tenders have been received by the Owner for the design, supply, erection, commissioning etc.: of 220 kV Transmission facilities with ancillary equipment for the West Wharf Thermal Power Station Project in KARACHI, PAKISTAN and the Tender of the Contractor for the said Contract has been accepted by the Owner.

NOW THEREFORE, for and in consideration of the promises, covenants, and agreements hereinafter contained and to be performed by the parties hereto, the said parties hereby covenant and agree as follows:

1. In consideration of the covenants and agreements to be kept and performed by the Contractor, and for the faithful performance of this Contract and the completion of the work embraced therein according to the specifications and Conditions herein contained and referred to, the Owner shall pay and the Contractor shall receive and accept as full compensation for everything furnished and done

1-162

by the Contractor under this Agreement the contract Price at the time and in the manner prescribed by the Conditions of Contract.

2. Said work shall be started immediately upon the Contractor's receipt, from the Owner, of a written order to proceed and the Contractor shall complete fully the work comprised in the Contract on or before the dates stated in the Tender, including maintenance period which shall be completed twelve (12) months after issuance of Provisional Taking Over Certificate. The maintenance of a rate of progress of construction which will result in its completion within the specified time is an essential feature of this Contract. The Contractor agrees to proceed with all due diligence and care, and at all times to take all precautions to ensure completion in accordance with the specified time.

This Contract shall become effective on the date of notification of approval by the funding agency. The Works performed and expenses incurred by the Contractor after the award of Contract, at the request of Owner, pertinent to the objectives of this Contract and period to its effective date shall, for the purposes of payment, be deemed to have been performed or incurred after the effective date.

3. The following documents shall be deemed to form and be read and construed as part of this Agreement:
 - a. Tender and Appendices along with covering letter
 - b. Tenderers Data Sheets
 - c. Conditions of Contract (Section III) and, Conditions of Particular Applications (Section IV)
 - d. Technical Specifications and Drawings

- e. Addenda Nos. 1 to _____ (which have been incorporated in the Contract)
- f. Notice of Award
- g. Performance and Advance Payment Bonds
- h. Delivery and Completion Schedule

4. This Contract shall be executed in counterparts, three (3) copies to be filed in the office of the Owner, two (2) with the Engineer, one (1) given to the Contractor and one (1) given to his Surety.

IN WITNESS WHEREOF, the parties hereto have executed this Contract in seven (7) counterparts, as of the day and year hereinabove set forth.

ATTEST:

KARACHI ELECTRIC
SUPPLY CORPORATION

(Secretary)

By _____

SEAL

ATTEST:

Contractor

(Secretary)

By _____

SEAL

1-164

EXHIBIT-B

FORM OF PERFORMANCE BOND

Bond executed on _____

Name of Surety and Address _____

Name of Principal (Contractor) and Address _____

Contract No. _____ Date of Contract _____

Panel Sum of Bond (express in words and figures) _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the said Contract and at the request of the said Principal (Contractor) we, the Surety above named, are held and firmly bound unto the Karachi Electric Supply Corporation Limited, hereinafter called the Owner, in the panel sum of amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal (Contractor) entered into a Contract for the Supply and Erection, of

for the, West Wharf Thermal Power Station Project Units 1 and 2, with the Owner, number and dated as shown above and hereto attached.

1-165

NOW, THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Contract during the original terms of the said Contract and any extensions thereof that may be granted by the Owner, with notice or without notice to the Surety, which notice is, hereby, waived and during the life of any guarantee required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the Contract and or any and all modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue until twelve (12) months after the scheduled date of Commercial Operation as stipulated in the Contract i.e. _____ or up to the end of period of Guarantee, whichever is later. Our total liability under this Bond or Guarantee is limited to a sum of _____

plus Pakistani Rupees

_____ and it is a condition of any liability attaching to us under this Bond or Guarantee that a claim in writing shall be received by us within the validity period of this Bond or Guarantee, failing which, we shall be discharged of our liability, if any, under this Bond or Guarantee.

The Surety, waiving all objections and defences under the aforesaid contract, hereby irrevocably and independently guarantee to pay to the Owner, without delay upon Owner's first written demand any amount claimed by the Owner up to the sum named herein, against Owner's written declaration that the Principal has refused or failed to perform the aforementioned Contract. For this payment the Surety will not refer to

1-166

the Principal (Contractor).

IN WITNESS WHEREOF, the above-bounded Surety has executed this instrument under its seal on the date indicated above, the name and corporate seal of the Surety being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

SURETY

WITNESS

1. _____ Signature _____
_____ (seal) Name _____
(Corporate Secretary) Title _____

(Corporate Surety) (Seal)

2. _____

COUNTER GUARANTEE

BY

SCHEDULED BANK IN PAKISTAN

WITNESS

Signature _____
Name _____
Title _____
Address _____

(Bank seal)

(seal)

1-167

EXHIBIT-G-1

UNDERTAKING BY CONTRACTOR

FOR

ISSUANCE OF PROVISIONAL TAKING OVER CERTIFICATE

OF

(Contract Designation)

To: _____
(Owner)

I, the undersigned Contractor for the above designated Contract (hereinafter called the "Contractor") with the Karachi Electric Supply Corporation Ltd. (hereinafter called the "Owner") do hereby undertake that:

- (1) The work to be performed by _____ (hereinafter called the "Contractor") pursuant to the Contract agreement dated _____ 19__ is completed and is in all respects in strict compliance with the provisions of the Contract, including all plans, specifications, maps and contract drawings and modifications thereof.
- (2) Payment has been made in full by the Contractor to all persons who have furnished labour and material for this Contract.
- (3) The Contractor has obtained valid release of lien from all persons, firms, and/or corporations furnishing material equipment and services which were employed by the Contractor in the performance

89/-1

of this Contract, and such releases have been delivered by the Contractor to the Engineer.

- (4) The complete cost account statement attached hereto and made a part hereof is a complete and accurate cost breakdown, and in accordance with the Cost Account Code, given to the Contractor by the Engineer of all Equipment and Material, and work performed in accordance with the Contract.
- (5) All defects in equipment, materials, and workmanship reported by the Engineer have been removed by the Contractor.
- (6) The total true and correct cost of the Contract so as completed is _____ in foreign currency plus Pakistani Rupees. Out of this total, the entire balance now due to the Contractor is _____ in foreign currency plus Pakistani Rupees _____.

THEREFORE, it is requested that Provisional Acceptance Certificate may be issued.

CONTRACTOR

DATE: _____

BY: _____

TITLE: _____

1-169

EXHIBIT-C-2

TO:

(Contractor)

CONTRACT NO. _____

SUPPLY AND ERECTION OF

PROVISIONAL TAKING OVER CERTIFICATE

Gentlemen,

Pursuant to the Provisions of Clause CC.53, para (a) of the Conditions of Contract, the Owner and Engineer hereby certify that -----
(Contractor)
completed satisfactorily the Works covered under above designated Contract in accordance with the provisions of said Contract Agreement dated ----- 19___, save and except the items of Works listed in the Attachment.

Now the Owner shall be deemed to have provisionally accepted the Works with effect from -----, subject to the provisions that the Contractor shall

1. complete the items of Works listed in the Attachment.

311-1

2. remain responsible for all defects arising during the Period of Guarantee as set out in Clauses CC.18 and CC-19 of the Conditions of Contract.
3. fulfill all other obligations under the Contract.

Yours faithfully,

ENGINEER'S
REPRESENTATIVE

THE KARACHI ELECTRIC SUPPLY
CORPORATION LIMITED

By _____

By _____

Title _____

Title _____

Date _____

Date _____

1-171

EXHIBIT-D

AFFIDAVIT OF CONTRACTOR

FOR

(Contract Designation)

CITY OF: KARACHI

MR. _____, being

duly sworn according to law, deposes and says that he is the _____

(Title)

of _____,

the Contractor, in a contract entered into between the Contractor and

the Karachi Electric Supply Corporation Ltd., the Owner, for the

West Wharf Thermal Power Station Units 1 and 2; and that he is

authorized to and does make this affidavit on behalf of said Contractor

to induce the Owner to make final payment to the Contractor in

accordance with the provisions of said Contract.

The Affiant further says that all persons or entities who have furnished

labour, equipment, materials and/or services in connection with said

Contract have been paid in full; that the names of manufacturers,

material suppliers and subcontractors who furnished any material or

services or both in connection with said Contract and that the kind or

kinds of materials or services or both in connection with said Contract

so furnished are:

NAME OF PERSONS/ENTITIES

KIND OF MATERIAL AND SERVICES

and that the Contractor has delivered to the Owner duplicate releases of
lien executed by all such manufacturers, materials suppliers, and
subcontractors.

(Signature of Affiant)

Sworn to and Subscribed
before me this _____ day
of _____, 19____.

(Notary Public)

1-173

EXHIBIT-E

CERTIFICATE OF COMPLIANCE

FOR

(Contract Designation)

TO: The Karachi Electric Supply Corporation Limited (KESC) I, the undersigned Contractor for the Contract above do hereby certify that:

The Work to be performed by _____
(hereinafter called the "Contractor") pursuant to the Contract dated _____, 19____, has been completed as of _____ 19, _____, and, to the best of my knowledge, was performed in all respects in strict compliance with all laws of the city of Karachi and the country of Pakistan.

(Contractor)

BY: _____

TITLE: _____

DATED; _____

I, _____ Notary Public hereby certify that _____

(Name of deponent)

(Title)

1-174

of _____ ("Contractor") whose name is signed to the
foregoing instrument, acknowledged before me this day that he, with full
authority, executed the foregoing instrument for _____

(Name of Organization)

Given under my hand and seal this

_____ day of _____ 19____.

(NOTARY PUBLIC)

EXHIBIT-F

RELEASE OF LIEN

FOR

(Contract Designation)

WHEREAS, the undersigned, _____

_____ has furnished to The Karachi Electric Supply Corporation Ltd. the Owner, the following: _____
(kind of equipment, material

_____ for use in the construction of and/or services furnished

_____ belonging to the said Owner.
(Name of Project)

NOW, THEREFORE, the undersigned _____ acknowledges
(Name of Contractor)

that, upon payment of the amount set forth in the undertaking by Contractor for Issuance of Provisional Acceptance Certificate, and verified by the Engineer accompanying this Release of Lien, it hereby does relinquish, waive and release any and all claims, liens, or right to or claim of lien, whether real or disputed, it may have had or now has against the Owner arising from the performance of the above Contract on the above described system and premises, under any law, common or statutory, on account of labour, Equipment and/or Materials heretofore and hereafter furnished by the undersigned to or for the account of said work i.e. _____

given under my hand and seal the _____ day of _____

9611-1

EXHIBIT-G

FORM OF
BANK GUARANTEE
FOR ADVANCE PAYMENT

Letter by the Guarantor to the Owner

Guarantee Expected on _____

On _____ the Karachi Electric Supply

Corporation Limited (hereinafter called the Owner) concluded with

M/s _____
(Name of Contractor with address)

_____ (hereinafter called

the Contractor) a Contract for _____

(Contract No. _____) for the West Wharf

Thermal Power Station Project Units 1 and 2.

According to the provisions of the Contract, the Contractor receives an
advance payment in the amount of _____.

We, the undersigned _____
(Name and address of Guarantor)

(bank) waiving all objections and defences under the aforementioned
Contract, hereby irrevocably and independently guarantee to pay to the
Owner without delay, upon Owner's first written demand without any
question and reference to the Contractor, any amount advanced to the
Contractor upto a total of _____

(in words) _____ against

Owner's written declaration that the Contractor has refused or failed to
perform the afore-mentioned Contract.

1-178

This guarantee shall come into force on receipt of the advance payment by the Contractor on his account.

The guarantee amount shall be reduced proportionately to the progress of the Works on the following conditions:

- The guarantee amount in Japanese Yen shall be reduced by _____ of the amount of Contractor's invoice with attachment of a copy of clean bill of lading by presentation of the same to the bank issuing the guarantee.

- The guarantee amount in Pakistani Rupee shall be reduced by _____ of the amount of the Contractor's invoice, as countersigned by the Owner and presentation of the same to the bank issuing the guarantee.

The guarantee will expire on _____ or till the Provisional Acceptance Certificate is issued by the Owner whichever is later, by which date we must have received any claim by registered letter, telegram or telex.

After the expiration of the said validity period, this guarantee shall become null and void no matter in whose possession it is and shall be returned to the Guarantor immediately.

GUARANTOR

Place: _____

Signature: _____

Date: _____

Name: _____

Title: _____

(Seal)

Witness:

1. _____

COUNTER GUARANTEE

BY

SCHEDULE BANK IN PAKISTAN

Signature: _____

Name: _____

Title: _____

Witness:

Address: _____

(Seal)

(Bank Seal)

* Delete whichever is not applicable.

88/1

SECTION IV

CONDITIONS OF PARTICULAR APPLICATIONS

181-1

SECTION IV. PARTICULAR APPLICATIONS

| | PAGE |
|--|-------|
| PA.1. KEY DATES | PA-1 |
| PA.2. PROGRESS OF WORK AND REPORTS | PA-2 |
| PA.2.1 PROGRESS OF WORK AND REPORTS | PA-2 |
| PA.2.2 PHOTOGRAPHS | PA-4 |
| PA.3. TRAINING FOR OWNER'S STAFF | PA-5 |
| PA.4. DRAWINGS | PA-6 |
| PA.4.1 DESIGN DRAWINGS | PA-6 |
| PA.4.2 CONSTRUCTION DRAWINGS | PA-6 |
| PA.4.3 SHOP DRAWINGS | PA-7 |
| PA.4.4 AS-BUILT DRAWINGS | PA-7 |
| PA.4.5 CHECK OF DRAWINGS | PA-7 |
| PA.4.6 DRAWINGS AND DATA SHEETS NEEDED | PA-7 |
| PA.4.7 OTHER DRAWINGS | PA-9 |
| PA.4.8 APPROVAL OF DRAWINGS | PA-9 |
| PA.4.9 SCHEDULE OF SUBMISSION ON DRAWINGS BY THE CONTRACTOR | PA-11 |
| PA.4.10 DRAWING MANAGEMENT (FLOW CHART) | PA-13 |
| PA.5. TRANSPORTATION | PA-18 |
| PA.5.1 TRANSPORTING LIMITATION | PA-18 |
| PA.5.2 CUSTOMS CLEARANCE AND TRANSPORT OF THE MATERIAL | PA-18 |
| PA.6. PACKING AND SHIPPING | PA-20 |
| PA.7. SPARE PARTS | PA-23 |
| PA.8. TOOLS | PA-25 |
| PA.9. RETURN OF LEFT OVER/SURPLUS MATERIAL | PA-26 |

1-182

| | PAGE |
|---|-------|
| PA.10. FORMULA FOR CONTRACT PRICE ADJUSTMENT ON CIVIL WORKS | PA-27 |
| PA.11. SITE FACILITIES AND ARRANGEMENTS | PA-29 |
| PA.12. DETAILS OF OFFER AND DEPARTURES FROM SPECIFICATION | PA-30 |
| PA.13. TIME SCHEDULE | PA-31 |
| PA.14. LOCAL CUSTOMS AND WAGES | PA-32 |
| PA.15. OPPORTUNITIES FOR OTHER CONTRACTORS | PA-33 |
| PA.16. SUPPLY OF PLANT, MATERIALS, AND LABOUR | PA-34 |
| PA.17. SANITARY CONVENIENCES | PA-35 |

17/193

SECTION IV. CONDITIONS OF PARTICULAR APPLICATION

These Conditions of Particular Application elaborate upon, modify, and supplement the conditions of Contract (Section III) as provided herein.

PA.1. KEY DATES

(1) Commencement time

The Contractor shall commence check survey work on Site within one month after signing of the Contract.

(2) Construction period

The whole works including witness in commissioning shall be completed within 22 months calculating from the date of the signing of the Contract.

(3) The section between tower No. 1 and tower No. 10 shall be completed by 15th December, 1991 so that 132 kV lines can be energized with 66 kV.

(4) As built drawings shall be submitted within 3 months after issuing of provisional acceptance certificate.

1-184

PA.2. PROGRESS OF WORK AND REPORTS

PA.2.1 PROGRESS OF WORK AND REPORTS

At monthly intervals during the Contract the Contractor shall submit detailed progress reports. The reports shall show clearly and accurately the position of all activities associated with design, material procurement, manufacture, works tests, shipping, site erection, testing and commissioning with regard to the agreed Contract programme.

The design aspect of the progress report shall include a comprehensive statement on drawings, calculations, proposals and schemes submitted for approval.

The report on material procurement shall give the date and details of orders placed and indicate the delivery quoted by the manufacturer. If any delivery has an adverse effect on the Contract programme the Contractor shall state the remedial action taken to ensure that delays do not occur.

The shipping of each order or part order shall be monitored on the progress report giving the date by which the equipment will be available for shipping, the estimated time of arrival on Site and the dates actually achieved.

The Site erection portion of the progress report shall be segregated into the main and ancillary items of civil, mechanical and electrical work and each item of work shall be monitored giving the percentage completion and the projected completion date of the

work in accordance with the agreed Contract programme.

Any delay which will affect the completion, testing and commissioning dates of any items of Plant shall be detailed by the Contractor who shall state the action he is taking to effect completion to the Contract programme.

The Contractor shall submit a report in respect of the various sections of the works, the erection equipment in use or held in readiness, a return of labour and supervisory staff, and details of any matters arising which may generally affect the progress of the work.

The Contractor shall give a summary of the detailed progress report giving the position with regard to the agreed Contract programme.

The progress reports shall be set out in a format to the approval of the Engineer, and forwarded promptly so that on receipt the information contained therein is not more than 21 days out of date.

If during execution of the Contract the Owner considers the progress position of any section of the work to be unsatisfactory, or for any other reason relating to the Contract, he will be at liberty to convene a meeting and the Contractor's Representatives are to attend such meetings.

The Contractor's Site Office shall prepare and submit 6 copies of a weekly progress report to the Owner/Engineer's Site Office. This report shall summarize site activities and record any details where difficulties in maintaining the agreed programme are being

experienced or are likely to cause subsequent delay.

The Contractor's Site Office shall also prepare and submit to the Owner/Engineer's Site Office 6 copies of a Daily Activity Report summarizing the main activities to be under taken each day, noting special activities.

The Contractor shall be responsible for expediting the delivery of all material and equipment to be provided by him and his sub-contractors.

PA.2.2 PHOTOGRAPHS

As soon as work commences on Site the Contractor shall provide photographs of the works from positions to be selected by the Engineer. Each photographic print shall not be less than 80 mm x 120 mm and shall bear a printed description, a serial number and the date when taken.

The negatives of all photographs shall be held at the Contractor's Site Office, numbered and handed-over to the Owner at the completion of the Contract.

The Contractor shall provide a number of selected photographs for submission with each copy of the monthly progress report as required by the Owner/Engineer. The Contractor shall also provide from time to time as and when required by the Owner, further photographs of the Contract Works to record or illustrate specific events.

PA.3. TRAINING FOR OWNER'S STAFF

The Owner shall make available, free of charge, to the Contractor the suitable number of staff members for the purpose of on-the-job training. They shall be made available for a period to be specified later. It shall be the responsibility of the Contractor to train them adequately and properly in a planned manner so that these members of the Owner's staff could take over the responsibility of operation and maintenance of the plant and equipment at the time of handing over of such plant and equipment.

The Contractor shall provide video aids, slides, and technical films for training purposes to the Owner's staff. Such materials shall become the property of the Owner without any charge.

1-138

PA.4. DRAWINGS

PA.4.1 DESIGN DRAWINGS

The Contractor shall submit to the Engineer for approval the design drawings and data sheets needed for carrying out the works for Lot II B. The approval procedure has been enumerated in Clause 4.8 hereof. The details of drawings and data sheets needed for the purpose are described in Clause 4.6 hereof. The drawings duly approved for construction will generally be designated as Construction Drawings.

PA.4.2 CONSTRUCTION DRAWINGS

After the issue of the Letter of Intent, the Tender Drawings will be replaced by Drawings Issued for Construction, with supplementary specifications as may be necessary. Such drawings will include the reissued Tender Drawings as may be modified and additional drawings as required to develop the work in greater detail and further modifications as necessary to detail the construction required. The Construction Drawings will be those drawings from which shop, erection, installation and other construction detail drawings shall be prepared by the Contractor.

The work shall be executed by the Contractor in conformity with the CONSTRUCTION DRAWINGS.

PA.4.3 SHOP DRAWINGS

All shop drawings required for the Works including fabrication, assembly, field assembly and erection layout and construction detail shall be furnished by the Contractor to the Engineer for approval. All drawings shall be completed and submitted in due time and in logical order to facilitate proper co-ordination. All such shop drawings submitted and approved shall form an integral part of the Contract.

PA.4.4 AS-BUILT DRAWINGS

The Contractor shall furnish at the completion of Works seven sets of as-built drawings prints and three sets of reproducibles covering all the relevant features of the Works for reference and record.

PA.4.5 CHECK OF DRAWINGS

The Contractor shall check all Drawings prepared by the Engineer/Owner carefully as soon as practicable after receipt thereof and shall promptly notify the Engineer of any errors discovered.

PA.4.6 DRAWINGS AND DATA SHEETS NEEDED

The following drawings, documents and data sheets shall be submitted to the Engineer/Owner for approval.

(1) General (not for approval)

o Reference Drawings;

Meaning those to be used for conference, discussion and reference purpose only.

o Final Drawings;

Meaning those prepared on the basis of finally approved drawings.

o As-built Drawings;

Meaning those prepared on the basis of construction/ installation as existing after completion of work.

(2) Drawings

. Profile, plan and restoring of tower site along the route

. Detail profile of tower site

. Type and shape of tower

. Major and auxiliary material

. Various kinds of indication mark, plate, etc.

. Structural drawings of tower

. Foundation drawings

. Working drawings

. Shop drawings

Specification

. Major and auxiliary material

. Construction tools

Calculation sheets

. Sag sheet

. Stress diagram

. Tolerance

. Study sheet

1-19

- | | |
|--------|---------------------------------------|
| List | . Actual tower weight |
| | . Manufacturer's names |
| | . Ledger for individual tower |
| Report | . Survey and boring schedule |
| | . Survey and boring report |
| | . Shop test schedule and procedure |
| | . Shop test report |
| | . Field test schedule and procedure |
| | . Field test report |
| | . Progress reports |
| Others | . Documents requested by the Engineer |

PA.4.7 OTHER DRAWINGS

Drawings showing proposed methods of construction and other drawings additional to those referred to here in above required by the Specifications shall also be submitted by the Contractor to the Engineer for approval.

PA.4.8 APPROVAL OF DRAWINGS

Drawings for approval or review shall be furnished to the Engineer/Owner by the Contractor and the size of the Drawing shall be A1 or A3 size. Within thirty (30) days after receipt of the prints of the drawings furnished by the Contractor, the Engineer will return one copy to the Contractor marked "Approved", "Approved Except as Noted" or "Returned for Correction". The notations "Approved" and "Approved Except as Noted" will authorize the Contractor to proceed

1-11/82

with the work covered by such drawings subject to the corrections, if indicated thereon by the Engineer. When returned drawings have the notation "Returned for Correction", the Contractor shall make the necessary revisions to the drawings and resubmit prints for approval in the same manner as for new drawings.

Every revision made during the period of the Contract shall be shown by number, date and subject in a revision block. Upon receipt of prints which have been "Approved" or "Approved Except as Noted", the Contractor shall furnish either prints of each drawing with necessary corrections to the Engineer unless otherwise directed. If revisions are made after a drawing has been approved, the Contractor, shall furnish along with the copy of approved drawing four additional prints subsequent to each approved revision. Any work done prior to the Engineer's approval of drawings shall be at the Contractor's risk. The Engineer will have the right to request for any additional details and ask the Contractor to make any changes in the design which are necessary to conform to the provisions and intents of the Specifications without additional cost to the Board/Engineer. The approval of a drawing by the Engineer shall not be deemed as a complete check but will indicate only that the general method of construction and detailing is satisfactory. Approval by the Engineer of the Contractor's drawings shall not relieve the Contractor of the obligation to meet all requirements of the Specifications or responsibility for the correctness of the Contractor's drawings or the responsibility for correct assembly of the parts in final position or the responsibility for the adequacy of method of construction.

PA.4.9 SCHEDULE OF SUBMISSION OF DRAWINGS BY THE CONTRACTOR

Before commencement of manufacturing any equipment under the Contract, the design criteria and calculations and dimensioned drawings and diagrams showing all details of the equipment and materials to be used shall be submitted to the Engineer for approval. These drawings and calculations shall be submitted within reasonable time from the date of Contract signing and in any case in sufficient time allowance to permit modifications to be made if such are deemed necessary and instructed by the Engineer without delaying the Contract Schedule. The drawings shall be modified as necessary if requested by the Engineer and resubmitted for final approval. The same criteria shall be equally applicable in case of design of foundations for the transmission line.

The Engineer shall be entitled to ask the Contractor submit the necessary drawings at any time regardless of the times mentioned hereunder to avoid delaying the completion of the Works.

When the Contractor prepares his construction schedule, as required herein, he shall make allowance for and indicate on the schedule, the drawing approval time. A period of at least ten (10) weeks should be allowed for such approval. Claims for extensions of time shall not be permitted on account of the late submission of drawings to the Engineer or for delays caused by drawings being not approved by the Engineer.

After approval of drawings by the Engineer, the Contractor shall supply the approved drawings to the Owner/the Engineer.

It is to be understood, however, that approval of the drawings shall not exonerate the Contractor from any responsibility in connection with the Work.

All drawings submitted for approval or sent to the Owner or the Engineer for any other reasons shall be sent by registered airmail.

After all items of the Work have been manufactured and erected, a complete set of reproducibles of drawings previously approved are to be submitted together with bound prints approved by the Engineer to the Owner through the Engineer.

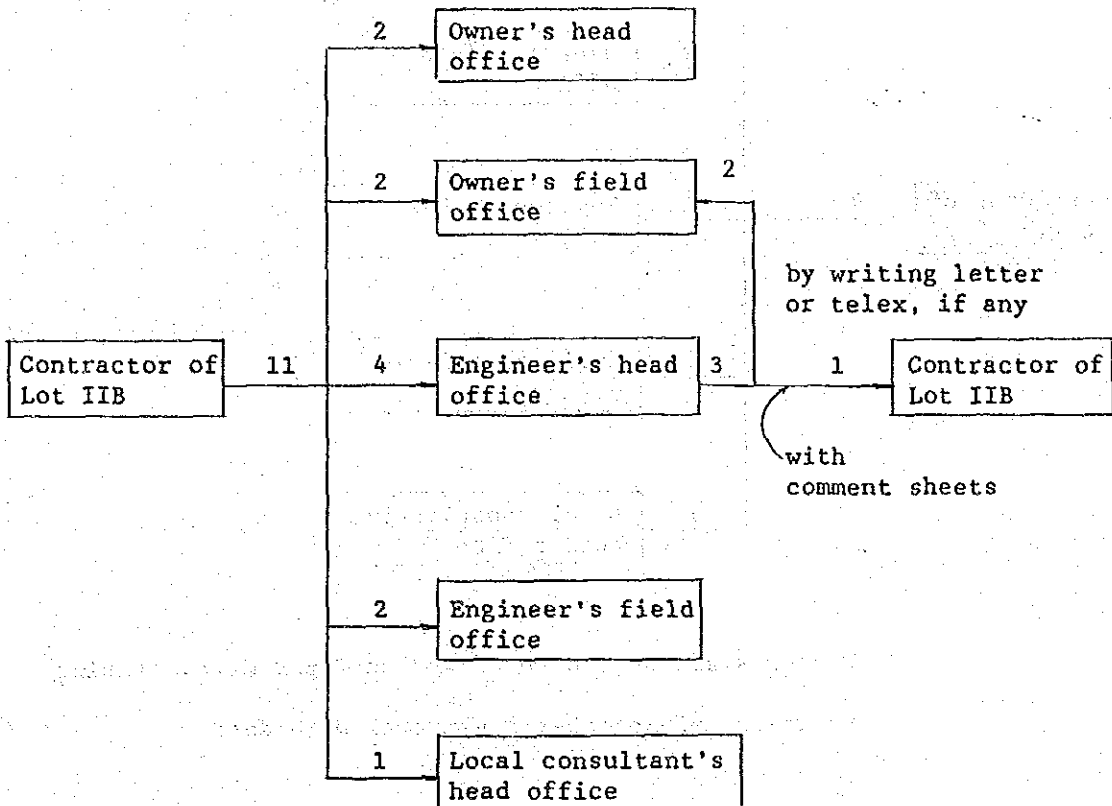
The details of the schedule as well as the particulars of the drawings, data and information to be submitted by the Contractor shall be decided before Contract signing.

1-195

PA.4.10 DRAWING MANAGEMENT (FLOW CHART)

(1) The drawings for approval shall be routed as shown below.

(a) Route flow until the drawings are approved by the Engineer

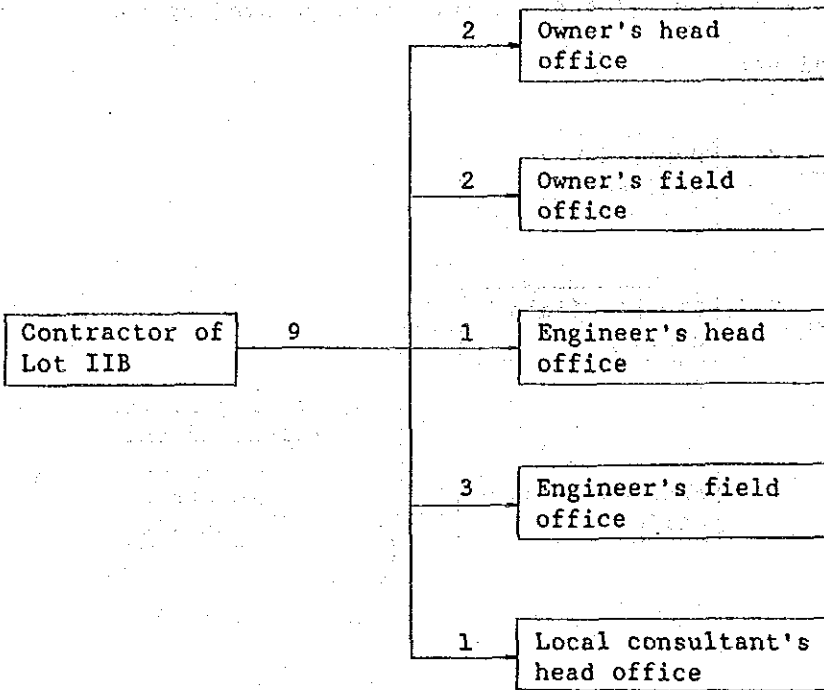


From 2nd submittal on, the Contractor shall submit the drawings with the comment sheets containing the answers of the Contractor.

After receiving approval from the Engineer, the approved drawings will become the final drawings. The final drawings shall be routed as shown below.

1-1-96

(b) Final drawings (Drawings approved and approval with comments by the Engineer)

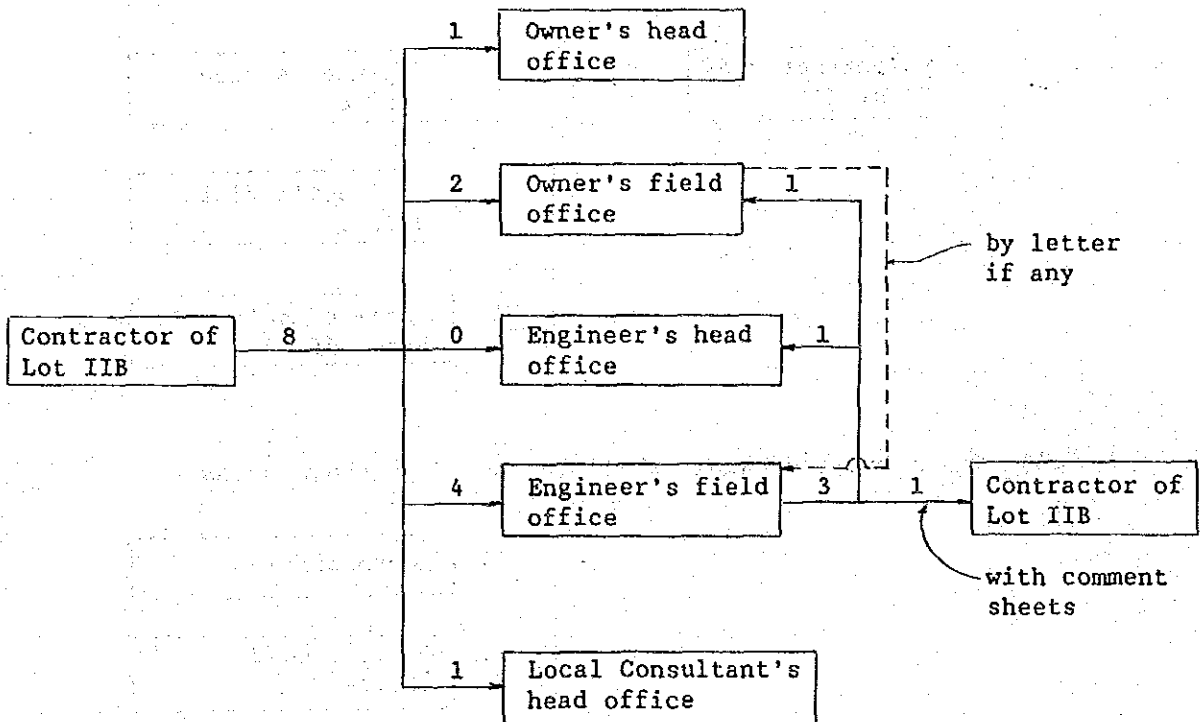


Proper stamp should be afixed on fired drgs. stating reference of Engineer's approval with date.

1-197

(2) The working drawings made by the field office of the Contractor

(a) Route flow until the drawings are approved by the Engineer



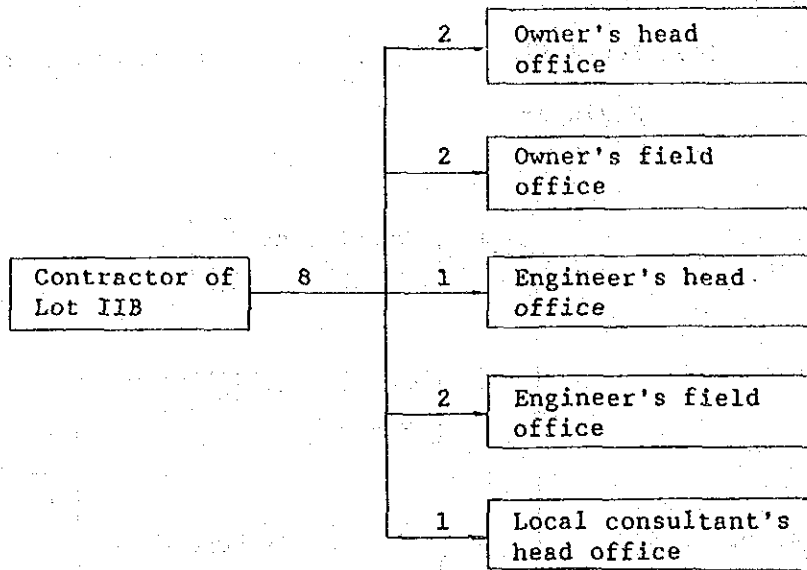
From the 2nd submittal on, the Contractor shall submit the drawings with the comment sheets containing the answers of the Contractor.

After receiving approval from the Engineer, the working drawings will become the final working drawings.

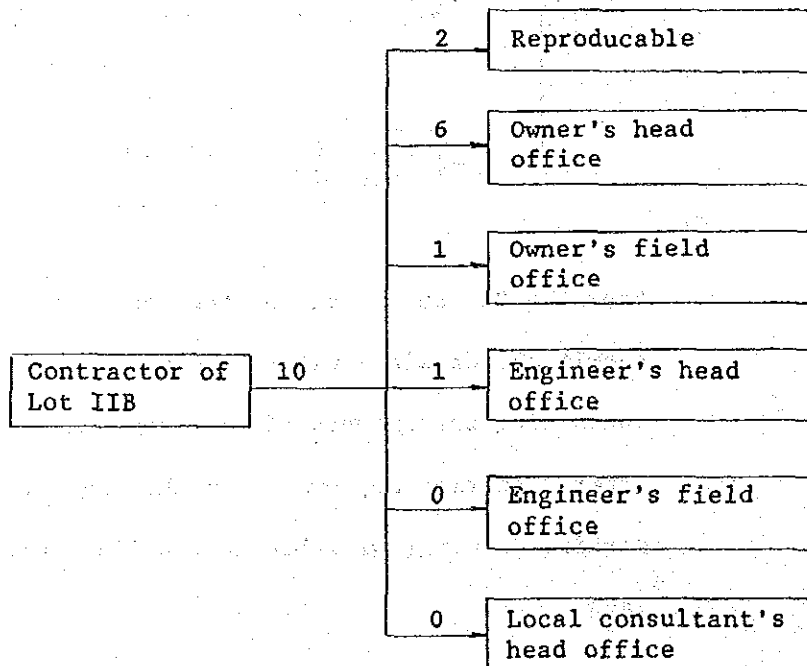
The final working drawings shall be routed as shown below.

88/1-1

(3) The reference drawings shall be routed as shown below.



(4) The asbuilt drawings shall be routed as shown below.



1-198

- (5) The Engineer will check the drawings to be approved, and will send the drawings back to the Contractor within one (1) month after the Engineer receives the drawings from the Contractor.
- (6) The Contractor shall submit as early as possible the revised drawings with the Engineer's comment sheets containing answers of the Contractor.
- (7) When additional information is needed for design or maintenance purposes, drawings, calculation sheets, etc., may be requested. In such cases, the information shall be submitted by the Contractor to the Owner and the Engineer at no additional cost.
- (8) Any works done before the approval of the drawings and calculation sheets shall be at the Contractor's risk, and any necessary design change to comply with the requirements of the Owner and the Engineer shall be made by the Contractor without additional cost or delay of the project.

PA.5. TRANSPORTATION

PA.5.1 TRANSPORTING LIMITATION

The Contractor shall assess the shipping situation in Karachi Harbour and transportation from harbour to Site as it will exist during the construction period and shall make provision for meeting his needs without detriment to the execution programme or disruption to public services and roads.

The Contractor shall take account of the requirements of the Port Authorities, Customs Authorities, Cargo Handling Organizations and all other parties who may in any way be concerned with or affected by the Tender.

PA.5.2 CUSTOMES CLEARANCE AND TRANSPORT OF THE MATERIAL

The Contractor shall make all arrangements and pay all the necessary costs for the transportation of his equipment, tools and materials from the place of manufacture to the port of Karachi and from there to the delivery site including all handling, loading and unloading.

The Contractor shall obtain all necessary Customs Clearance for the equipment, tools and materials imported into Pakistan under the Contract. The Owner will assist the Contractor with these clearances.

The Contractor shall inspect the cargos upon their arrival at the delivery site and shall report in writing the particulars,

quantities and condition of cargos and any damage hereto to the Owner within three (3) days after the arrival of the cargos.

In the event of damage to all or part of the cargo, the Contractor shall immediately submit a damage report counter-signed by the Owner to the insurance company with copies to the Owner.

The Engineer will direct the Contractor to repair or replace damaged items following his inspection thereof. All costs of replacing or repairing of damaged items will be borne by the Contractor.

Immediate action shall be taken and reported in detail to the Owner to order replacement items for all items damaged beyond repair or missing and deliveries of replacement items shall be made to ensure that the scheduled construction commissioning dates are met.

1-202

PA.6. PACKING AND SHIPPING

(1) All equipment and materials shall be suitably coated, wrapped, or covered and boxed or crated for moist, humid tropical ocean shipment and to prevent damage or deterioration during handling.

(2) Packing list and shipping mark

All items packed and consigned in each shipment shall be clearly shown on the packing list, specifying contract number, package number, item number, weight, dimension, the name of the Owner, Contractor's name and any other necessary marks.

Each crate or package shall contain a packing list in a waterproof envelope. All items shall be clearly marked for easy identification against the packing list.

Each bundle, package, case or any other type of containers delivered under the Contract shall bear the shipping mark and shall be clearly marked on the outside to show where the weight is bearing and the correct position of the slings, etc.

(3) The packing specification for each kind of the Material shall be as follows:

(a) Steel towers

Steel angle members and small materials of towers shall be packed tower by tower. The steel angle members shall be carefully tied up in bundles with steel tapes. The small materials, such as small short angles, plates, ring

fillers, filler plates, bolts and nuts shall be enclosed in strong wooden boxes. The bolts and nuts shall be packed in the boxes after being put separately into burlap bags, to which tags showing the contents shall be attached.

The following items shall be clearly and indelibly shown on each bundle of the angle members and each box of small materials. The marks shall be permanent and unerasable.

Name of line

Tower number

Tower type with body extension

Vertical bend angle of plate members to be connected to the tension insulator strings and ground wires

The details of packings and markings of the tower members and materials will be instructed by the Engineer before shipment.

(b) Stub setting templates

The stub setting templates shall be packed in wooden boxes.

(c) Conductors and ground wires

The conductors and ground wires shall be wound on sturdy wooden drums made of timber of good quality, and the drums shall be reinforced to prevent deformation thereof during transportation and storage.

The circumference of each drum shall be tightly covered by wooden plates. The kind, size and length of the conductor

1-204

and ground wire shall clearly be marked on the outside of each wooden drum, and the correct rolling direction shall also be indicated on the outside of each drum by an arrow mark.

(d) Fittings of conductor and ground wire

Fittings which shall be used together with conductors and ground wires, such as sleeves, dampers, spacers and preformed armour rods, shall be packed in sturdy wooden boxes. The name, kind, size, etc., of the fittings shall clearly be marked on the outside surface of those boxes.

(e) Insulators and fittings

The suspension insulators shall be packed in sturdy crates or boxes in such a manner that the contents of the packages are fully prevented against any damages during the handling and loading on to and unloading from ships, inland transportation, and handling at the Site.

Fittings which are to be used together with insulators, such as clamps, various hardware, arcing horns, etc., shall be packed in sturdy wooden boxes.

The name, kind, size, etc. of the fittings shall be clearly marked on the outside surfaces of those boxes.

PA.7. SPARE PARTS

- (1) The Contractor shall furnish all the mandatory spare parts specified in the Specifications and recommended spare parts selected by the Owner. All spare parts shall be duplicates of the original parts furnished and interchangeable therewith. The spare parts listed in the Tender shall serve the equipment furnished and shall be adequate for a minimum of five (5) years satisfactory operation based on an eighty (80) percent utilization factor.

The Contractor shall guarantee that such spare parts will be available for a period of ten (10) years from the due date of Provisional Acceptance Certificate.

- (2) All spare parts must be delivered to the Site in advance of the Trial Operation Test. The Contractor shall ultimately prepare and deliver nine (9) copies of the final consolidated spare parts list, arranged with the unit prices and quantities.
- (3) The Contractor shall follow a system of designating and tagging each and every spare part for ease of inventory storekeeping. The final consolidated Spare Parts List shall bear such tagging particulars as will be convenient to locate the spare part without any loss of time.
- (4) The Contractor shall organize the delivery and systematic storage of spare parts before the initial operation is required to obviate post erection difficulties and delays. Any spare part consumed by the Contractor before Provisional Acceptance

1-206

shall be expeditiously replaced without cost to the Owner.

- (5) All spare parts must be prepared and protected for long term storage to preclude damage during this period. Storage requirements shall be submitted to the Owner and the Engineer.

Lot-1

PA.8. TOOLS

Special tools are specified in some instances under the Technical Specifications. Where not specified, the Contractor shall nevertheless furnish, suitably boxed, one (1) complete set of new and unused tools which are necessary or convenient for operation, maintenance and repair work of all equipment and materials under his supply. Complete lists of all such tools shall be submitted to the Owner soon after completion of manufacture of equipment and before its actual shipment. Shipment containers shall be suitable for permanent storage of tools by the Owner.

PA.9. RETURN OF LEFT OVER/SURPLUS MATERIAL

The Contractor shall keep record of the quantities of all materials imported into Pakistan under the Contract, quantities of material received in the storage yard at the Site and quantities issued for erection and balanced in stock.

On completion of the Works, the Contractor shall return to the Owner all the material imported under Category "A" on the basis of relevant shipping documents less the material installed on the Works.

17-209

PA.10. FORMULA FOR CONTRACT PRICE ADJUSTMENT ON CIVIL WORKS

With reference to Clause IT.7.3, Unit Rate for Civil Works, for the civil works involved with the tower foundations the following provisions shall apply:

- (1) For any increase/decrease in the cost of steel, SR cement and petrol and diesel and for increase/decrease in the unskilled & skilled labour wages due to any Government regulations/order after the date of bid opening, the contract price will be adjusted according to the price escalation formula given hereunder:

$$A_1 = \frac{A}{100} \left(35 + 24 \frac{ULI}{UL} + 10 \frac{LI}{L} + 6 \frac{PI}{P} + 8 \frac{DI}{D} + 7 \frac{SI}{S} + 10 \frac{CI}{C} \right)$$

Where:

A₁ = Adjusted contract price

A = Original contract price

025-1

(2) The other factors are as follows:

| | <u>Basic Index figure (42 days prior to tender)</u> | <u>Final Index figure (determined at the time of payment)</u> |
|--|---|---|
| Minimum wages for unskilled labour | UL | ULI |
| Minimum wages for skilled labour | L | LI |
| Petrol (regular) per litre | P | PI |
| Diesel fuel per litre | D | DI |
| Reinforcing steel bars ex-factory per ton | S | SI |
| Sulphate resistant cement ex-factory per ton | G | GI |

In determining the amount of any increase or decrease to the Contract Price pursuant to this section, no account shall be taken of any fluctuation as a result of Government orders or otherwise in the cost of benefits i.e. bonus, gratuity, education, group insurance, paid holidays, casual leave, workmen compensation etc. Any increase or decrease in the price of materials which have ceased to be used on the project shall not be considered in the adjustment of Contract price, and the ratio will be taken as one (1).

The basic indices are to be provided by the Contractor in the bid (with source and date).

PA.11. SITE FACILITIES AND ARRANGEMENTS

- (1) The Contractor shall arrange on his responsibility, an outdoor storage space adequate for storage of plant equipment and materials and for temporary site offices during the execution of the Contract.
- (2) The Contractor shall provide and maintain all temporary structures required including warehouses, change houses for workmen, sheds, etc. He shall also provide his own field office complete with telephone so that he or his official representative can be reached by the Owner and/or the Engineer at all times.
- (3) The Contractor shall provide his own watchman service to ensure security and safety of the equipment and materials.
- (4) The Contractor shall provide and maintain his own lavatory facilities. The Owner's existing storage, toilet, and washroom facilities are not available to the Contractor or his personnel.
- (5) The Contractor shall provide all rigging, planking, dunnage, tools, supplies, scaffolding, guard barriers, warning lights, construction equipment, compressed air, testing apparatus and precision instruments required to complete his work.
- (6) All temporary erection facilities described above shall be removed by the Contractor after completion of the Works unless otherwise desired by the Owner.

PA.12. DETAILS OF OFFER AND DEPARTURES FROM THE SPECIFICATION

If the Bidder wishes to vary or amend parts of the Specification as an alternative, he shall complete the corresponding Schedule of "Bidder's Data Sheet - Departures from or Qualifications to the Specification Associated with Alternative Bid" - as provided herein and he must refer to the Part, Clause and Section of the Specifications which the Bidder proposes to vary or amend. In such case the Bidder shall provide a statement of his reasons for proposing such alternatives, modifications or qualifications.

Notwithstanding any description, drawings, or illustrations which may be submitted with the Bid, only those departures or variations as listed will be considered and apart from these it will be deemed that the Bidder complies entirely with the requirements of the Specifications.

1-21/3

PA.13. TIME SCHEDULE

Further to the requirements of Section IT, the Contractor shall, within 30 days award of Contract, submit a detailed Contract Programme, in the form of a bar chart, for the Contract Works to the Owner/Engineer for comments or approval. Copies of the approved bar chart as required by the Owner/Engineer shall be provided by the Contractor.

If required by the Owner/Engineer, a further programme shall be provided as a Critical Path Network or similar and shall show the interfaces between the respective phases and sections of the Contract Works. In addition, the Contractor shall prepare and submit during the Contract detailed subnetworks of certain phases of the Contract programme as required by the Owner/Engineer covering erection, testing and commissioning. The updating period shall be four weeks.

If at any time during the execution of the Contract it is found necessary to modify the approved programmes, the Contractor shall inform the Owner or the Engineer and submit modified programmes for his approval. Any approval of changes to the approved programmes shall not constitute approval of an extension to the guaranteed completion date.

PA.14. LOCAL CUSTOMS AND WAGES

The Contractor at all times during the continuance of this Contract shall in all his dealings with local labour for the time being employed on or in connection with the Works have due regard to all local festivals and religious or other customs. The Contractor shall pay wages and observe conditions not less favourable than those observed by good employers engaged in like works within Pakistan.

The Contractor shall in respect of the Works and Temporary Works conform to all laws and all statutory rules, regulations and by-laws in force from time to time in the place where work is being or is to be executed which shall include the payment of contributions due by law to Provident Fund (if any) and shall give all notices and shall pay all fees that may be lawfully demanded by any public officer in respect of the Works and Temporary Works; and he shall perform all duties and pay all assessments and sums required to be paid in respect of employees and labourers employed by him on the Site under any law from time to time in force.

PA.15. OPPORTUNITIES FOR OTHER CONTRACTORS

The Contractor shall in accordance with the requirements of the Owner/Engineer afford all reasonable opportunities for carrying out their work to any other contractors employed by the Owner and their workmen and to the workmen of the Owner and of any other duly constituted authorities who may be employed in the execution on or near the site of any work not included in the Contract or of any contract which the Owner may enter into in connection with or ancillary to the Contract. If, however, the Contractor shall on the written request of the Owner/Engineer make available to any such other contractor or to the Owner or to any such authority any roads or ways for maintenance of which the Contractor is responsible or permit the use by any such of the contractor's scaffolding or other plant on the Site or provide any other service of whatsoever nature for any such use the Owner shall pay to the Contractor in respect of such use and service, such sums as shall in the opinion of the Engineer be reasonable.

PA.16. SUPPLY OF PLANT, MATERIALS, AND LABOUR

Except where otherwise specified the Contractor shall at his own expense and risk, supply and provide all the Constructional Plant, Temporary Works, materials, both for temporary and for permanent work, labour (including the supervision thereof), transport to and from the Site, and other things of every kind required for the purpose of or in connection with the Contract.

1-217

PA.17. SANITARY CONVENIENCES

Sanitary conveniences for the use of persons employed by the Contractor and his subcontractors shall be provided and maintained by the Contractor to the extent and in such a manner and at such places as shall be approved by the Owner or the Engineer and all persons connected with the works shall be obliged to use them. The Contractor shall make all temporary arrangements for refuse and garbage collection and disposal and for the proper treatment and discharge of sewage and drainage from or in connection with the works and shall maintain the same to the satisfaction of the Owner or the Engineer and the Authority concerned as long as they may be required.

The Contractor shall prohibit the committing of any nuisance on the site or upon the land of the Owner or adjacent landowners and any employee found violating this provision shall be liable to immediate dismissal and will not be again employed on the Site.

1-2/8E

