

(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
(d) Bearing and assemble	set	1		
(e) Oil seal rings and O-rings	set	2		
(f) Brush	%	1,000		
(g) Brush holder	set	10		
(h) Cooling air filter for collector ring	%	200		
(B) Exciter and AVR				
Control device	%	100		
(a) Module	piece	2 each type		
(C) H ₂ gas control cubicle				
(a) Silica gel	%	200		
(b) H ₂ gas reducing valve	set	1		
(D) Seal oil unit				
(a) Packing and gasket	%	400		
(b) Differential pressure control valve	set	1		
(E) Isolated phase bus duct				
(a) Insulator	piece	4		
(F) Potential transformer				
(a) Secondary fuse	%	200		
(b) Current limiting fuse for primary	%	200		

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(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
(G) Main transformer				
(a) Hightension side bushing	piece	1		
(b) Lowtension side bushing	piece	1		
(c) Bursting plate	set	2		
(d) Packing and gasket	%	200		
(e) Removal type unit radiator (including fan and motor)	set	1		
(f) Thermo-element of temperature detector	piece	2		
(g) Silica gel	%	200		
(h) Insulation oil	lit.	600		
(H) Auxiliary transformer				
(a) Hightension side bushing	piece	1		
(b) Lowtension side bushing	piece	1		
(c) Bursting plate	set	2		
(d) Packings and gasket	%	200		
(e) Removal type unit radiator	set	1		
(f) Thermo-element of temperature detector	piece	2		
(g) Silica gel	%	200		

(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
(h) Insulation oil	lit.	600		
(i) Lightning arresterset with condenser	set	1		
(I) Starting transformer				
(a) Hightension side bushing	piece	1		
(b) Lowtension side bushing	piece	1		
(c) Bursting plate	set	2		
(d) Packings and gasket	%	200		
(e) Removal type unit radiator	set	1		
(f) Thermo-element of temperature detector	piece	2		
(g) Silica gel	%	200		
(h) Insulation oil	lit.	600		
(i) Lightning arrester with condenser	set	1		
(J) 6,600V M/C				
(a) PT primary and secondary fuse	%	200 each		
(b) VCB assembly				
3,000A	set	1		
600A	set	3		
(K) 400V power center				
(a) PT primary and secondary fuses	%	200 each		

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(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
(b) Movable and fixed contactors for ACB				
3,000A	set	3 each		
600A	set	6 each		
(c) Complete assembly of ACB				
3,000A	set	2		
600A	set	4		
(L) 400V control center				
(a) Unit assembly	set	6		
(M) Distribution panel				
(a) Molded type circuit breaker	set	6		
(N) Emergency diesel generator				
(a) Diesel engine				
Admission gear rods	set	1		
Exhaust gear rods	set	1		
Piston rings	set	1 each piston		
Connecting rod bush	set	1		
Cylinder head and accessories	set	2		
Admission valves	set	1 each type		
Exhausting valves	set	1 each type		

(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
Valve spring	set	1 each type		
Injector	set	2		
Injector holder	set	2		
Oil cartridges	set	2		
Joints	%	100		
(b) Generator				
Brushes	%	200		
Brush holder	set	2		
Control device	%	100		
Module	piece	2 each type		
(O) Battery and charger				
(a) Battery cells	cell	11		
(b) Battery charger module	set	2		
(c) Electronic part	%	100		
(P) Paging				
(a) paging handset	set	2 each		
(b) Speaker				
horn type	set	4 each		
cone type	set	2 each		

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(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
(Q) PABX				
(a) Fuses	%	200 each type		
(b) Lamps	%	200 each type		
(c) Condensor	%	200		
(d) Varistor	%	200		
(e) Discharge tube	%	200		
(f) Relay	set	20 each type		
(g) Resistor of relay	%	200 each type		
(h) Jumper wire	%	200		
(i) Oil	%	200		
(j) Expendables		each type for Five (5) years		
(k) Fuse for repair	%	200		
(l) Telephone set	set	25		
(R) Clock				
(a) Slave clock	set	5		

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(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
(S) Lighting				
(a) Lighting fixture except mercury vapor lamp	set	5 each type		
(b) Lighting fixture for mercury vapor lamp	set	10 each type		
(c) Mercury vapor lamp	set	50 each type		
(d) Power receptacle	set	10 each type		
SUB-TOTAL				
TOTAL OF GENERATOR AND ELECTRICAL EQUIPMENT				

Carried to Summary Sheets

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(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
5. PLANT COMPUTER SYSTEM				
(1) Computer System				
(A) Cards	set	1 each		
(B) Indicator lamps	%	200 each		
(C) Fuses	%	200 each		
(D) CPU power unit	set	1 each		
(E) I/O unit	set	1 each		
(f) Standard spare parts	set	1 each		
SUB-TOTAL				
(2) Printer				
(A) Cards	set	1 each		
(B) Paper for printer	box	20		
(C) Ribbon	roll	40		
(D) Standard spare parts	set	1 each		
SUB-TOTAL				
(3) CRT Display				
(A) Cards	set	1 each		
(B) Cathode ray tubes	set	1 each		
(C) Standard spare parts	set	1 each		
SUB-TOTAL				

(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
(4) Fixed Head Disk or IC bulk				
(A) Cards	set	1 each		
(B) Standard spare parts	set	1 each		
SUB-TOTAL				
(5) Floppy Disk Devices				
(A) Cards	set	1 each		
(B) Standard spare parts	set	1 each		
(C) Floppy disk	sheet	10		
SUB-TOTAL				
(6) Trend Recorder				
(A) Cards	set	1 each		
(B) Pens	set	1 each		
(C) Ink	set	2 each		
(D) Chart	roll	40		
SUB-TOTAL				
(7) Hard Copy				
(A) Cards	set	1		
(B) Standard spare parts	set	1		
(C) Ribbon	set	1		
SUB-TOTAL				
TOTAL OF PLANT COMPUTER SYSTEM				

Carried to Summary Sheets

498

(Tenderer's Name)

EXPENDABLES

Power Plant Equipment

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
(1) Nitrogen (N ₂) gas (7 Nm ³)	cylin- der	20		
(2) Carbog dioxide (CO ₂) gas (7 Nm ³)	cylin- der	10		
(3) Standard gas for gas analyzer				
(a) 4.5% O ₂ in N ₂ gas (2 Nm ³)	cylin- der	20		
(b) 4.5% H ₂ in N ₂ gas (2 Nm ³)	cylin- der	4		
(4) Hydrazine (N ₂ H ₄) as 100% N ₂ H ₄	kg	100		
(5) Phosphate (Na ₃ PO ₄ ·12H ₂ O) as 100% Na ₃ PO ₄)	kg	100		
(6) Ammonia (NH ₃) gas	cylin- der	10		
(7) Sodium nitrate bactericide (for cooling water system)	kg	100		
(8) Dry chemical	kg	1,800		
(9) Potassium hydroxide (KOH 25% weight)	kg	60		

499

(Tenderer's Name)

MANDATORY SPARE PARTS

2. Building Service Facility

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
1. AIR CONDITIONING AND VENTILATION SYSTEM				
(1) Fan				
(A) Bearing	%	200 each unit		
(B) V-belt	%	200 each unit		
SUB-TOTAL				
(2) Air Cooled Packaged Air Conditioner				
(A) V-belt	%	200 each unit		
(B) Bearing	%	200 each unit		
(C) Fuse	%	200		
(D) Prefilter		200		
(E) Packing	%	200 each unit		
SUB-TOTAL				

420

(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
(3) Filter				
(A) Filter element	%	200		
(B) Lamp	%	100		
(C) Fuse	%	200		
(D) Relay	%	100		
SUB-TOTAL				

Total of
Air conditioning and
ventilation system

(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
2. WATER SUPPLY, SEWAGE AND SANITARY SYSTEM				
(1) Hot Water Storage Heater				
(A) Thermostat	%	200 each		
(B) Fuse	%	200		
(C) Float	%	100		
(D) Heater	%	100		
(E) Packing	%	200 each		
(F) Lamp	%	100 each		
SUB-TOTAL				
(2) Waste Water Pump				
(A) Mechanical Seal	%	200		
(B) Bearing	%	100		
SUB-TOTAL				
(3) Piping				
(A) Grand packing and gasket for valve (each rating, size, kind)	%	200		
SUB-TOTAL				

502

(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
(4) Septic tank				
(A) Packing for each pump	%	200		
(B) Bearing for blower	%	200		
(C) Disinfectant	%	200		
SUB-TOTAL				

Total of
Water supply, sewage and
sanitary system

(Tenderer's Name)

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
3. SECONDARY ELECTRICAL AND AUTOMATIC CONTROL SYSTEM				
(1) Panel (each panel)				
(A) Lamp for operation and annunciator	%	400		
(B) Relay	%	200 each		
(C) Control switch and push button	%	100		
(D) Fuse (each)	%	200 each		
SUB-TOTAL				
TOTAL OF BUILDING SERVICE FACILITY				

Carried Summary Sheets

705

(Tenderer's Name)

TENDERER'S RECOMMENDED SPAREPARTS
(For three(3) years)

1. Power Plant Equipment

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
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505

(Tenderer's Name)

TENDERER'S RECOMMENDED TOOL AND TESTING EQUIPMENT

1. Power Plant Equipment

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
------	------	----------	-------------------	--------

905

(Tenderer's Name)

TENDERER'S RECOMMENDED SPARE PART
(For three (3) years)

2. Building Service Facility

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
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507

(Tenderer's Name)

TENDERER'S RECOMMENDED TOOL AND TESTING EQUIPMENT

2. Building Service Facility

Currency in Country Origin

Item	Unit	Quantity	Unit Price FOB	Amount
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805

SCHEDULE OF PRICE
FOR
RECOMMENDED SPARE PARTS

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SCHEDULE OF PRICES
FOR TENDERER'S RECOMMENDED SPARE PARTS
(For Five (5) Years)

(Tenderer's Name)
(UNIT:)

Item	Unit	Quantity	Unit Price	Amount
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GENERAL CONDITIONS OF CONTRACT

SECTION III: GENERAL CONDITIONS OF CONTRACT

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SECTION III. GENERAL CONDITIONS OF CONTRACT

CC.1. DEFINITIONS

In the Contract, the following words and expressions shall have the meaning herein assigned to them unless the context otherwise requires:

(a) The "Owner" means:

Karachi Electric Supply Corporation Limited (KESC) who has called for tenders to design, provide and execute the Works and who will employ the Contractor and the legal successors in title to the Owner and shall include the Owner's legal personal representatives.

(b) The "Engineer" means:

Name and address of the Engineer

or other person

for the time being or from time to time duly appointed in writing by the Owner to act as Engineer for the purposes of the Contract and includes such other person (if any) to whom the Engineer's authority may have been lawfully delegated pursuant to the Contract.

(c) "Contractor" means the Tenderer whose Tender has been accepted by the Owner and includes the Contractor's legal personal representatives, successors and permitted assigns.

(d) "Contract Agreement" means the document referred to in Clause CC.7.1 hereof.

(e) "Tender Documents" are the legal and technical documents which

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constitute the basis for the Tender.

- (f) "Tender" means the offering of the Tender in response to the Tender Documents.
- (g) "Tenderer" means the person, partnership, company, corporation or consortium that submits a Tender.
- (h) "Equipment" means and includes machinery, apparatus, materials, articles, spare parts and things of all kind to be provided under the Contract, which, when accepted, will become the property of the Owner.
- (i) "Project" means the West Wharf Thermal Power Station Project - Units 1 and 2.
- (j) "Subcontractor" means the person or firm or company to whom any part of the Works has or will be sublet by the Contractor with the written approval of the Owner and sub-contractor's legal representatives, successors, or assignees as approved by the Owner.
- (k) "Manufacturer" means the person or party who will design and/or manufacture the Equipment as specified, complete or in part required under the Contract.
- (l) "Specifications" or "Specified" means the requirements of the Documents and modifications thereof made under Clause CC.14 hereof.
- (m) Where the words "directed", "required", "permitted" "approved", "accepted", or similar terms are used, the "direction", "request", etc. shall be understood to mean "by the Owner" and/or "by the

Engineer".

- (n) The words "indicated or shown" shall be understood to mean "on the drawings", "on the diagrams" or on any other document.
- (o) "Works" means and includes all equipment to be provided and work to be done by the Contractor under the Contract.
- (p) "Site", or "Project Site", means the place or places named in the documents and include, where applicable, the lands and buildings upon which the Works are to be executed.
- (q) "Day", "week", "month" means calendar day, calendar week, or calendar month respectively.
- (r) Words implying the singular only shall also include the plural and vice versa where the context so requires.
- (s) The term "person" shall include firm, company, corporation, and consortium.
- (t) "Provisional Taking Over" means that fabrication, construction, tests and adjustment have been satisfactory completed and works taken over pursuant to Clause CC.57.

The headings in these Conditions of Contract shall not be deemed part thereof or shall be taken into consideration in the interpretation of construction thereof or of the Contract.

CC.2. ENGINEER AND ENGINEER'S REPRESENTATIVE

CC.2.1. ENGINEER'S DUTIES

The Engineer shall carry out such duties in issuing decisions, certificates and orders as are specified in the Contract.

CC.2.2. ENGINEER'S POWER TO DELEGATE TO ENGINEER'S REPRESENTATIVE

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. The Engineer shall furnish to the Contractor a copy of such written delegations of powers and authorities and also of any revocation thereof. No such delegation or revocation have effect until a copy thereof has been delivered to the Contract.

Any written decision, instruction or approval given by the Engineer's Representative to the Contractor in accordance with the terms of such delegation (but not otherwise) shall bind the Contractor and the Owner as though it had been given by the Engineer provided always that:

- (1) any failure of the Engineer's Representative to disapprove any Equipment work or materials or workmanship shall not prejudice the power of the Engineer thereafter to disapprove such equipment work or materials or workmanship and to reject the Equipment, work or materials or workmanship as not acceptable and to order the rectification thereof in accordance with these Conditions;
- (2) if the Contractor shall be dissatisfied by reason of any decision

of the Engineer's Representative he shall be entitled to refer the matter to the Engineer who will thereupon confirm, reverse or vary such decision.

CC.2.3. DUTIES AND POWERS OF ENGINEER'S REPRESENTATIVE

The Engineer's Representative shall be responsible to the Engineer and his duties are to watch and supervise the works, and to examine and supervise testing of any Equipment or materials to be used or workmanship employed in connection with the Works. The Engineer's Representative shall have no authority to relieve the Contractor of any of his duties or obligations under the Contract nor to make any Variation Order nor except as expressly provided in the Contract, to order any work involving delay in completion or any extra payment to the Contractor by the Owner.

CC.2.4. EMERGENCY POWERS OF ENGINEER'S REPRESENTATIVE

Notwithstanding the provisions of Clause CC.2.3 hereof if in the opinion of the Engineer's Representative an emergency occurs at the Site affecting the safety of life or the Works or of adjoining property, he may direct the Contractor, his servants and agents at the Site to carry out all such work or to do all such things as may be necessary in the opinion of the Engineer's Representative to abate or reduce the risk. The Contractor, his servants and agents at the Site shall forthwith comply without appeal with any such direction of the Engineer's Representative. The Engineer shall determine the amount (if any) of extra payment to which the Contractor may be entitled in accordance with

the Contract in respect of work done or anything done pursuant to the provisions of this Clause.

CC.3. EXAMINATION OF SITE

The Contractor shall be deemed to have carefully examined the Contract Documents, the Site and the existing installation as applicable to have satisfied himself as to the nature and character of the Works to be executed and other relevant matters and details. Any information received from the Owner or Engineer shall not in any way relieve the Contractor from his responsibility for supplying equipment and material and executing the Works in terms of the Contract Documents, including all details and incidental work and supply of all accessories or apparatus which may not have been specifically mentioned in the Contract Documents but are necessary for ensuring a complete installation and safe and efficient working of the Project.

CC.4. LAWS, RULES AND REGULATIONS

The laws, rules and regulations of the Government of Pakistan and all other governmental authorities having jurisdiction over the Works of the Project shall govern with the same force and effect as if written herein. Where such laws, rules and regulations conflict with the Contract, the more stringent requirements, as interpreted by the Engineer, shall govern. Should such conflicts require changes in the Contract, the Contractor shall promptly notify the Engineer. The Contractor shall remove and replace free of cost to Owner's all those Works which do not meet the requirements of the said laws, rules and

regulations.

CC.5. LOCAL AUTHORITIES

The Owner will serve all notices and obtain assents, wayleaves and permissions required in connection with by-laws of any local or other authority having jurisdiction on this matter.

CC.6. PATENTS

The Contractor shall provide for and pay all royalties and licence fees, and shall save the Owner and the Engineer harmless from loss or annoyance on account of suits or claims of any kind for violation or infringement of any letters patent, or patent rights, by the Contractor or anyone directly or indirectly employed by him, or by reason of the use by him or them of any part, machine, manufacture or composition a matter in connection with the Works furnished, in violation or infringement of such letters or rights.

CC.7. CONTRACT AGREEMENT

CC.7.1. CONTRACT AGREEMENT

The Contractor shall when called upon so to do enter into and execute a Contract Agreement (to be prepared at the cost of the Owner) in the form annexed with such modifications as may be necessary.

CC.7.2. COMPLIANCE WITH CONTRACT

Equipment, materials and services shall be complete in all respects and

in strict accordance with the Contract. The Contractor shall comply with the codes and standards specified in the Contract Documents which shall be the latest revisions of international standards/codes.

CC.8. PERSONNEL TAXES AND DUTIES

The Contractor or his employees shall pay all personal income or other taxes due in Pakistan for personnel employed by the Contractor for supervising the erection work included in the Contract. The personal taxes of the Contractor's employees and duties on goods imported by the Contractor or his employees shall be the responsibility of the employee and/or the Contractor. These taxes and duties shall be payable in Pakistani Rupees. The Contractor shall obtain at his own cost, work permits from competent authorities to enable any foreign personnel to work in Pakistan. The Contractor shall be responsible for all formalities in connection with passports, obtaining visas, police permits, and expenses for customs duties related to personal goods of foreign personnel employed on the Project. However, the Owner will, if requested, assist the Contractor in obtaining visas and work permits.

CC.9. INCOME TAX

The Contractor shall be responsible for all Contractor's corporate or Company income tax payable in Pakistan. The income tax if payable in Pakistan will be local currency costs. Normally income tax is paid out of profit and shall be payable in Pakistani Rupees.

CC.10. IMPORT DUTIES, IMPORT PERMITS AND CONSULAR FEES

Import duties, sales tax, surcharges, import permit fee, Octroi and other charges applicable on import of equipment and material will be the responsibility of and will be paid for by the Owner for all items covered under Category "a" below. The Contractor shall pay the import duties, sales tax, surcharges, import permit fee, Octroi, and other charges associated with import of equipment and materials shown under Categories "b" and "c". The Owner will be liable to pay import duties, permit fee sales tax and other charges on C&F value of the contracted amount. Import duties on equipment and material in excess of the contracted C&F value, consigned under "No-Charge" invoicing shall be payable by the Contractor.

Category-a

All equipment and material imported by the Contractor for the Project which, when accepted, will become the property of the Owner.

Category-b

All equipment and material which is the property of the Contractor necessary to be used at the Site in order to properly carry out the Works, and which ultimately will be exported on completion of the Project.

Category-c

All equipment and material which is the property of the Contractor,

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necessary to be used at the Site in order to properly perform the work, and which ultimately will be sold on completion of the Project.

The rate of import duty, sales tax, etc. on categories "b" & "c" above will be the applicable rates at the time of import into Pakistan and shall be paid in full by the Contractor at such time. The Contractor shall also arrange for all import permits and pay any incidental clearance expenses required although the Owner will assist in obtaining the permits if so requested by the Contractor. At the time of export, a certain amount of duty will be refunded to the Contractor in accordance with Custom's Rules.

Government permit for sale for Category "c" shall be obtained by the Contractor. The Owner will have first option to purchase these items.

A "No-Charge" invoice is required by the customs authorities giving the cost and freight price of each consignment involved so that the correct import duty can be assessed.

No Pakistan consular fees are involved in connection with the Project.

All import permits for Category "a" above will be obtained by the Owner.

Upon arrival of each consignment of such imported equipment and materials under Category "a" the Owner will arrange with his clearing agent for the clearance therefor. All formalities in this respect will be performed by the Owner who will bear all incidental clearance expenses as may be required.

A Contractor's representative shall also be constantly associated with the clearing agent to verify and confirm the imported equipment and material and the relevant documents.

CC.11. PERMITS AND FEES

Unless otherwise provided in the Contract, the Contractor shall obtain and pay for all permits and other documents necessary to complete the Works, and these permits/certificates and documents shall be delivered to the Engineer and they will become the property of the Owner.

CC.12. TRANSPORTATION INSURANCE

- (a) The Contractor shall obtain an all risk insurance for marine and inland transportation (in Pakistan and abroad) including coverage for customs duties (totalling 150% of C&F value) without war risk to cover all loss and damage from Contractor's (manufacturer's) warehouse to Site for imported material and equipment.
- (b) The Contractor shall from time to time when so requested by the Engineer's Representatives, produce the policy and receipts for the premiums.
- (c) All insurance policies for individual consignment shall be valid for ninety (90) days after the receipt of material at Site, enabling thorough checking for loss and damage.
- (d) All formalities in connection with processing of insurance claims shall be the sole responsibility of the Contractor.
- (e) Should a loss be sustained, the Contractor shall replace or repair any loss or damage free of cost and complete the Works in accordance with the Contract on a priority basis without awaiting settlement of insurance claim(s).

(f) For the inland transportation of indigenous equipment and materials, the Contractor shall arrange and pay for transportation insurance with National Insurance Corporation of Pakistan which shall cover all risks, i.e. fire, flood, theft, damage due to exposure, breakages, loss in transit, or through riots, strikes, civil commotion, etc. from the manufacturer's plant warehouse up to the Site, plus ninety (90) days of storage after arrival of each consignment at Site. The insured value of each consignment shall be such as to ensure replacements being obtained free of cost to the Owner at the Site. Such values shall be subject to the approval of the Owner.

CC.13. SUBCONTRACTORS

Except where otherwise provided by the Contract, the Contractor shall not appoint any sub-contractor for any part of the Works without the prior written consent of the Engineer.

The Contractor is obliged to keep his subcontractor fully informed as to the contents and requirements of these documents.

CC.14. CHANGES

(a) The Owner reserves the right during the progress of the Works to make any changes, additions or omissions that he may desire and the same shall be executed by the Contractor without impairing the Contract. The value of any such changes will be agreed upon in writing before the changed work is started, and will be added to or deducted from the Contract Price. The Contractor shall submit to

the Engineer, for checking and approval, the rate analysis giving the value of labour, material, overheads and profit, involved in each change, with the time required to make such change.

- (b) No claim for changes or additions will be allowed unless the same is ordered in writing by the Engineer, at a cost to be agreed upon and stated in the order. No claim will be allowed for loss of prospective profits on any cancelled portion of the Works.

CC.15. COORDINATION WITH OTHER CONTRACTORS

- (a) The Owner reserves the right to let other contracts in connection with the Works. The Contractor shall afford such other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work simultaneously with his own and shall properly connect and coordinate his work with theirs.
- (b) Two (2) black and white prints of all drawings and documents prepared by the Engineer or other contractors on the basis of drawings documents and information as furnished by the Contractor in accordance with the Contract Documents will be sent to the Contractor for counter-checking and confirmation.

The Contractor shall promptly, but not later than 7 days check such drawings and documents for compliance with the requirements of his equipment and his interests and shall return one (1) print with his examination endorsement and/or comments to the Engineer.

The Contractor shall immediately inform the Engineer of any discrepancies, errors or omissions in the drawings and documents

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furnished to him under this Clause.

On failure to meet these requirements the Contractor shall be liable for any resulting damage and expenditure.

- (c) The Contractor shall cooperate with the contractors of other related equipment in the mutual exchange of all necessary drawings, dimensions, templates, gauges, data and other information required to ensure the complete and proper design and manufacture of all connecting or related parts. No extra compensation shall be claimed by the Contractor because of any modifications required to accommodate the equipment of other contractors unless otherwise specifically provided herein, and all adjustments shall be made between the respective contractors without extra cost to the Owner. The Owner and Engineer shall receive 3 copy of all correspondence between contractors.
- (d) Should the occasion arise that the Contractor believes that the other contractor has failed or may fail to supply any requested information related to the equipment, and that lack of such information will affect his contractual obligations, then he shall seek the Engineer's assistance to have such information provided.
- (e) If any part of the Contractor's work depends upon the proper execution or results of the work of any other contractor, the Contractor shall inspect and promptly report in writing to the Engineer any defects in the other contractor's work that render it unsuitable for proper execution or results. His failure to so inspect and report shall constitute an acceptance of the other

contractor's work as fit and proper for the execution of his work, except as to defects which may develop in the other contractor's work after the execution of his work.

- (f) To ensure the proper execution of his subsequent work, the Contractor shall examine/measure work already in place and shall at once report to the Engineer any discrepancy between the executed work and the drawings.

CC.16. ASSIGNMENTS

The Contractor shall not assign or sublet this Contract in whole or in part without the written consent of the Owner. The approval of any assignment or subcontract by the Owner will not relieve the Contractor from responsibility for such assigned or sublet work in the event that it is not satisfactorily performed by the subcontractor.

CC.17. PERFORMANCE BOND

- (a) The Contractor shall within forty-five (45) days from the date of the issuance of Notice of Award of the Contract, furnish at his cost one Performance Bond in a sum of 20% of the total Contract Price i.e. (20% of the value of foreign currency portion of the Contract Price in foreign currency and 20% of the value of local currency portion of the Contract Price in local currency) as a guarantee for the due and faithful performance of the Contract. Such guarantee shall be binding notwithstanding any variations, alterations or extensions of time that may be given or agreed upon. Said Performance Bond from a foreign bank shall be counter-

guaranteed by a scheduled bank of Pakistan and the Bond shall be in a form acceptable to the Owner.

- (b) The Performance Bond shall be according to Exhibit-B.
- (c) No claim shall be entertained against the Owner on account of interest on security deposits.
- (d) The Performance Bond, bank guarantee or any other guarantee shall be indemnified in favour of the Owner and it shall be valid for a period of 12 months after Provisional Taking Over of the Plant or up to the end of Guarantee Period as given in Clause CC.19, whichever is later.

CC.18. GUARANTEE FOR MATERIAL, WORKMANSHIP AND PERFORMANCE

CC.18.1. GUARANTEE FOR MATERIAL, WORKMANSHIP AND PERFORMANCE

- (a) The Contractor shall guarantee that the materials and workmanship incorporated into the work are new and the best of their respective kinds for the service intended and that all items will be free from inherent defects in design, workmanship and materials, and that all equipment in its several parts will operate successfully at all capacities up to and including the maximum specified load, specified noise levels, heating, stressing of parts, wear and vibration, and that an ample factor of safety is included in every design.
- (b) Manufacturer's equipment warranties, if they exceed the period of the Contract guarantees as defined in these documents, shall be

transferred to the Owner at the end of the Contract guarantee period.

(c) Guarantees, when required by the Specifications, shall be furnished by the Contractor upon forms approved by the Engineer and shall be signed by both the Contractor and the subcontractor whose work is involved.

(d) The Contractor's liability shall not be limited only to the replacement of any defective part or equipment that may develop in the equipment or material of his own work or manufacture or those of his subcontractor under proper use and arising solely from faulty design, materials, or workmanship during the guarantee period but he shall also be responsible for replacement, erection and commissioning of such equipment/material which is damaged due to any mishap caused as a result of defective materials/equipment or inadequate workmanship of the Contractor.

Replacement of the defective parts or equipment as mentioned shall be effected provided always that such defective parts are not repairable at the Site, are not essential in the meantime in commercial use of the equipment, and are properly returned to the Contractor's factory unless otherwise arranged.

(e) All replacements shall be made free of cost including without limitation on transportation costs, custom duties, sales taxes etc.) at the Site by the Contractor and the return of the defective parts to the Contractor's factory shall be the Contractor's responsibility and shall be made at his expense. The Owner will,

however, render such assistance as necessary to expedite the same. In the case of defective parts not repairable at the Site but essential in the meantime for the commercial use of the equipment, the Contractor shall replace free of cost at the Site the said defective parts. The defective parts shall not be removed from the site before the arrival of the replacement parts.

CC.18.2. DEFECTS AFTER PROVISIONAL TAKING OVER

(a) As soon as the Works have been completed in accordance with the Contract including successful continuous uninterrupted operation of thirty (30) days and performance tests, except in minor respects that do not affect their use for the purpose, the Owner will issue a certificate counter signed by the Engineer, herein called a "Provisional Taking-Over Certificate", in which he will certify the date on which the Works have been so completed and the Owner shall be deemed to have taken over the Works on the date so certified, but the issue of a Provisional Taking-Over Certificate shall not operate as an admission that the Works have been completed in every respect.

The Contractor shall be responsible for making good with all possible speed any defect in or damage to any portion of the Works which may appear or occur during the period starting from the Provisional Taking Over of that portion and up to the end of the twelve (12) months maintenance

period and which arises either:

- i) From defective materials, workmanship, or design (other than a design made, furnished, or specified by the Owner and for which the Contractor has disclaimed in writing within a reasonable time after receipt of the Owner's instruction), or
- ii) From any act or omission of the Contractor's Works or omitted during the said period

(b) If any such defects shall appear or damage occur, the Owner and the Engineer shall inform the Contractor thereof stating in writing the nature of the defect or damage. If the Contractor replaces or renews any portion of the Works, the provisions of this clause shall apply to the portion of the Works so replaced or renewed until the expiration of twelve (12) months from the date of such replacement or renewal.

(c) The period of twelve (12) months mentioned in subclause a) and b) of this Clause shall be extended by a period equal to the period during which the Works or that portion thereof in which a defect to which this clause applies has developed cannot be used by reason of that defect.

(d) If any such defect or damage is not remedied within a reasonable time, the Owner may proceed to do the Work at the Contractor's risk and expense, but without prejudice

to any other rights which the Owner may have against the Contractor in respect of the failure of the Contractor to remedy such defects.

(e) If the replacements or renewals are of such a character as may affect the efficiency of the Works, or any portion thereof, the Owner may within one (1) month of such replacement or renewal give to the Contractor notice in writing requiring that tests on completion be made, in which case such tests shall be carried out as provided in these documents, the cost of the test shall be borne by the Contractor.

(f) These conditions of Contract shall apply to all inspections, adjustments, replacements, and renewals and to all tests occasioned thereby, carried out by the Contractor pursuant to this Clause.

(g) Until the Final Completion Certificate shall have been issued, the Contractor shall have the right of access, at all reasonable working hours, at his own risk and expense, by himself or his duly authorized representatives whose names shall have previously been communicated in writing to the Owner/Engineer, to all parts of the Works for the purpose of inspecting the working thereof and to records of the working and performance thereof and for the purpose of inspecting the same and taking notes therefrom. Subject to the Owner's and the Engineer's approval, which shall not be

unreasonably withheld, the Contractor may at his own risk and expense make any tests which he considers desirable.

(h) If the Owner or the Engineer certifies that any defects which have shown themselves within the maintenance period are of such a nature as to require the Contractor's skilled attention, the Contractor shall send to the Site supervisory staff in such numbers and for such periods as may be necessary to remedy such defects in a timely manner.

(i) Any spare parts furnished by the Contractor in connection with the Works under the Contract or by addition thereto shall be guaranteed to be free of manufacturing defects and shall upon any failure occurring within twelve (12) months, from their incorporation into the Works, be replaced without cost to the Owner subject to a limit of forty-eight (48) months from the date of shipment.

CC.19. PERIOD AND EXTENT OF GUARANTEE

(a) The Period of Guarantee on all equipment, materials and workmanship shall be 12 months starting from the effective date of Provisional Taking Over by the Engineer or as expressly stated elsewhere in the Contract Documents, including Clause CC.18.2 hereof.

(b) If during the Guarantee Period the services of the Contractor's personnel are required for the rectification or replacement of any defective part of the work due to defective material, design or

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workmanship, such services shall be made available by the Contractor without charge to the Owner.

- (c) In addition to the general guarantees stated in Clause CC.18 and this Clause the Contractor shall comply with the performance and other special guarantees described in the technical Specifications of the Contract.

CC.20. QUALITY OF EQUIPMENT/WORKMANSHIP

- (a) All equipment and all material shall be manufactured by companies which have had at least ten years previous experience in the design and manufacture of equipment and/or material of comparable type, capacity and operating conditions.
- (b) Where the requirements of the Specifications make any material proprietary or non-obtainable, the Engineer reserve the right to waive any portion or portions of it as required to obtain the intent of the technical Specifications.
- (c) When a manufacturer's product is specified by name, or equivalent, it will be in the sole judgement of the Engineer to accept any product which is offered as equal to that specified.
- (d) Contract shall be based on the equipment and materials specified, and any request to substitute any alternative items shall be stated and completed in accordance with Clause IT.4 of the Instruction to Tenderer and the amount to be added or deducted shall be given in the Contractor's Data Sheet. Any request for substitution after the award of the Contract shall not be allowed. However, in special

circumstances it will be the Owner/Engineer's discretion to consider the request of the Contractor.

CC.21. INDIGENOUS EQUIPMENT AND MATERIAL

So far as may be consistent with his obligations under the Contract and considerations of economy and efficiency, the Contractor shall make the maximum possible use of materials supplies and equipment indigenous to or produced in Pakistan and the services available in Pakistan or operated by Pakistan.

CC.22. PACKING AND MARKING

- (a) All equipment and materials, together with the applicable instruction book, packing list and special site storage instruction, shall be carefully boxed, crated or otherwise adequately protected for overseas shipment. Flanges, studs, and exposed machine-finished surfaces shall be thoroughly greased and protected before shipment. Any equipment that will be damaged by water or high humidity shall be encased in water-tight and/or air-tight, rugged containers; suitable desiccants shall be placed inside each air-tight container to ensure a low-humidity atmosphere therein. For additional requirements on packing see Clause PA.19.
- (b) Each separate package of material (and each component within a package); item of equipment, fixture, box, crate or other shipping enclosure shall be marked and tagged in the English language with the following information:

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- (1) Owner's Contract number and Engineer's technical specification number.
- (2) Engineer's item number for all equipment or other contents.
- (3) Contractor's job and item reference number, if any.

Marking shall be by means of block letters not less than 1/2" high stencilled on the box, crate or package with black paint in an easily read location. When stencilling is not possible, the information shall be marked on a durable metal tag which shall be securely wired to the equipment, package and each component within a package.

- (c) A typical example of marking will be indicated by the Engineer later.

CC.23. UNLOADING AND STORAGE AT SITE

- (a) The Contractor shall unload all imported equipment and materials at the site from trucks and trailers and indigenous items from delivery vehicles as the case may be in accordance with Clause PA.3.
- (b) Storage methods shall be such as to cause minimum inconvenience to others and shall be arranged to facilitate inspection.
- (c) All equipment and materials storage shall comply with the requirements of Clause PA.2 and PA.3 or shall be to the approval of the Owner.
- (d) All packing boxes, containers (but not shipping containers)

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 in charge 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 occurring 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 occurring 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. (For signs refer Clause PA.17.)
- (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. as required in Clause PA.9.
- (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.9.

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 Taking Over 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. SERVICES BY APPROVED AGENCIES OR INSPECTION COMPANIES

The Owner may at his discretion select any of the companies submitted by the Tenderer to provide the required services as follows:

- The certificate of designs and drawings and the check of scantlings of the components subjected to pressure or vacuum including air receivers.
- The certification of designs and drawings of cranes, lifting tackle and any other items of equipment which in the opinion of the Engineer require inspection.
- The inspection and certification that all such components and equipment items are manufactured, constructed and tested in accordance with the accepted standards.
- The inspection and certification of the pressure parts, cranes and lifting tackle during erection and commissioning on Site.

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

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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

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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.

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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.

Blank forms of these are attached hereto as Exhibits C.1, C.2, D, E 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 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.

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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

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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.

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.

- (1) 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 fuel, electricity, water, 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. During the trial operation period, the Contractor shall furnish the supervisory operating personnel plus any calibration devices, special test instruments, lubricants, chemicals, etc., required to prepare for and conduct the performance tests. The initial fills

and first fill of turbine oil after completion of all testing of the turbine shall be supplied by the Contractor. The Contractor shall specify in his Tender the Brand name of the turbine lubricating oil and its detailed specifications. The Owner will furnish fuel, and the system electrical load and also furnish an operation and maintenance staff for the Contractor's use during the period. However, the Contractor shall be fully responsible for the operation and other consumable materials to be used for this period.

The Contractor shall also be responsible for twelve (12) months operation and maintenance after the issuance of Provisional Taking Over Certificate by providing supervisory staff of the required number.

Contractor's supervisory personnel shall conduct instruction sessions in the English language for the Owner's personnel prior to and during the above period and shall otherwise train them so that they will be able to operate and maintain the new equipment satisfactorily after acceptance by the Owner. The training programme of the Owner's personnel shall be conducted to meet the satisfaction of the Owner Engineer. The Contractor shall provide the service of competent personnel knowing the English language for training the staff of the Owner.

- (h) The Contractor shall be responsible for operation and running during the trial operation period and for the proper operation and function of all auxiliaries and controls.

- (i) The time consumed in startup and trial operation shall be considered as a part of the erection and installation period.
- (j) 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 auxiliaries such as steam generator, turbine/generator, condenser, motors, pumps, heaters, fans, piping, valves, building facilities and all other mechanical and electrical equipment and materials, etc. 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 individual operation test i.e., rotation test, no load test, coupling on load test etc. and necessary adjustments, repairs etc., will be made as required.

Following the satisfactory completion of the individual operation test, the subsystem such as auxiliary equipment which consist of equipment and small loop system will be put in the operation test i.e., coupling load test, equipment running test, etc.

After finishing the subsystem operation test the system such as steam generator, turbine, generator, common auxiliary, etc., which consist of some subsystems will be placed in the operation test.

Following the satisfactory completion of the system operation test the unit which consists of total system will be put in the startup and trial operation, and necessary adjustments, repairs, etc., will be made as required.

During startup and trial operation, overspeed test, load up test, control loop tuning test, combustion test, load swing test, load dump test, island operation test and FCB (Fast Cut Back) test shall be performed.

- o The load up test shall be performed with the load up to maximum continuous rating (MCR) load.
- o The load dump test shall be carried out at the load of up to 4/4. Carrying out the load dump test of 1/4 up to 4/4 shall be judged after the power system conditions have been evaluated.
- o The island operation test which contains the FCB or alternative

test shall be executed at the load of up to 4/4.

Carrying out the test of 1/4 up to 4/4 shall be judged after the power system conditions have been evaluated.

o Further testing procedure concerning the mentioned items and other subsidiary tests shall be discussed between the Contractor and the Owner/Engineer.

The Contractor shall carry out the continuous operation test after finishing the start up and trial operation successfully, as follows.

(c) Continuous Operation Test

The continuous operation test means that the unit shall be operated on line of the electric power system for thirty (30) days, without shutting down the unit with any load between minimum to maximum load in conformity with the requirement of the Load Dispatching Generation Programme. During this continuous operation test, the plant maximum load and capability load test shall be carried out for a period of two (2) days each and one (1) day for plant minimum load test continuously.

Should the unit be tripped out by the reasons of trouble due to the equipment supplied under the Contract, during the continuous operation testing, the Contractor shall start the test all over again, that is, thirty (30) days continuous operation.

However, if the reasons of the trip out is due to the reason other than above, the elapsed time should be counted excluding the time of disconnection from electric power system.

Sample form of startup and trial operation reports will be prepared by the Engineer, and these reports shall be recorded and submitted by the Contractor to the Owner/Engineer.

(d) Performance Test

After the trial operation test and the continuous operation test have been completed, performance tests shall be run to determine whether the equipment complies with the guarantees. The tests shall be conducted in accordance with procedures specified in Section I, Part II of the Technical Specifications. (Volume 3)

Prior to the performance test the Contractor will be allowed to carry out cleaning and other preparation for the test, if necessary.

(e) Provisional Taking Over

Even if the equipment and auxiliaries such as turbine room overhead crane, water treatment equipment, outdoor tanks, elevator, air conditioning equipment for main power house, etc., supplied by the Contractor are found to meet the guarantees and all other specified requirements, 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

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replace the rejected equipment. Such operation shall not be deemed as taking over.

(f) 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.

(g) 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.

<u>Specified Performance</u>	<u>Allowable Deviation From Guaranteed Performance</u>	<u>L/D for Deviation From Guaranteed Performance For Each Items</u>
*Guaranteed kW Capacity	-0.2 Percent	1.0 Percent of the Contract Price for each 0.1 Percent decrease in output
*Heat Rate kcal/kWh	+1.0 Percent	1.0 Percent of the Contract Price for each 0.1 Percent increase in heat rate

* Measured at the Generator Terminals.

Detailed informations for the Liquidated Damages and Guarantees shall be referred the Section I, Part-II in the Technical Specifications.

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 4) 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 1) 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.

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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 provisions 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) If the Works are divided into two or more sections, subclause 1) hereof shall apply to each section as it applies to the Works. If by agreement between the Owner and the Contractor any portion of the Works (other than Section or Sections) shall be taken over before the remainder of the Works, the Owner and/or the Engineer shall issue a Provisional Taking Over Certificate in respect of that portion.

Even if the equipment and auxiliaries such as turbine room overhead crane, water, water treatment equipment, outdoor tanks, elevator, air conditioning equipment for main power house, etc., supplied by the Contractor are found to meet the guarantees and all other specified requirements, the Provisional Taking Over will be forthcoming only after all other works called for in the Contract have been satisfactorily completed.

- (c) 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.

(d) 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 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 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.

80% (Eighty percent) 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

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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 percent)

Eighty (80) percent of the total erection price shall be in percentage listed below, and shall be paid on the basis of actual performance and completion of the respective activity.

.Drum lifting	20%
.Boiler hydrostatic test	30%
.Initial firing	20%
.Steam admission	10%

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 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 proportion to the relation of transported

f.o.b. 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 training of Owner's Personnel

100% (Hundred percent) Upon submission of monthly invoices.

(h) 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) Eighty (80) percent of the total cost
shall be paid as progress payment and
payment shall be made as follows:

	Percent
First steel pipe pile driving	15%
First concrete placing of main powerhouse	15%
Structural steel erection start	10%
Drum lifing	10%
Initial watering of cooling	20%

waterway.

Steam admission 10%

The payment shall be made against the Owner's Payment Certificate for Unit 1 and Unit 2, respectively.

10% (Ten percent) Final payment; upon Final Completion certificate of the works and upon submission of one certified copy of the documents in accordance with Clause CC.44 of the Condition of Contract.

The payment shall be made against the Owner's payment certificate for Unit 1 and Unit 2, respectively.

- 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

SK

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

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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 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:

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	<u>For the Owner</u>		<u>For the Engineer</u>		<u>Regis- tered Surveyor</u>	<u>Total</u>
	<u>Office</u>	<u>Job Site</u>	<u>H.O.</u>	<u>Job Site</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 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 Two (2) units of Oil Fired Thermal Power Plant with ancillary equipment for 200 MW 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

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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:

(Secretary)

By _____

SEAL

Contractor

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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.

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NOW, THEREFORE, if the Principal shall well and truly perform and fulfil 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

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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)

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EXHIBIT-C-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

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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: _____

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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.

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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 _____

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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

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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)

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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)

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 _____

_____.

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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.

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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.

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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.

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SECTION IV

CONDITIONS OF PARTICULAR APPLICATIONS

SECTION IV. CONDITIONS OF PARTICULAR APPLICATION

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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. ELECTRICITY, WATER SUPPLY AND COMPRESSED AIR

(1) Electric Power Supply

The Owner will provide a temporary 11 kV installation for electric power supply at Site. From the terminals of the Owner's distribution board the Contractor shall provide his own distribution system including overload protection devices for power services necessary to perform the construction and erection of equipment in a safe and efficient manner. The distribution system shall comply with the requirements of the local safety regulations, and shall be to the approval of the Government Electrical Inspector.

The design, location, utilization and maintenance of the system shall be to the approval of the Owner who may require the disconnection or alteration of any part which is in his opinion not acceptable. The Contractor shall be responsible for the operation of the temporary lighting and power distribution system, including all cables, spares and other items. The Contractor's power, telephone and other utilities shall be underground and routed as approved by the Owner or the Engineer at Site.

The Contractor shall describe fully in his Tender the distribution system and equipment he proposes to install giving

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a detailed list of the electrical loads anticipated for the various consumers. The Contractor shall be charged for use of electric power according to the applicable Tariff.

(2) Water Supply

The Owner will provide raw water from available source at the site, which may not be sufficient to the Contractor's requirements.

The additional requirements of the water shall be arranged by the Contractor himself.

However, the Owner will assist the Contractor in this regard.

(3) Compressed Air

The Contractor shall provide his own compressed air for erection work and other purposes.

PA.2. 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.3. ACCESS INSTALLATION AND WORK AT POWER STATION SITE

During the execution of work at Site, no person other than the Contractor, Subcontractor and their employees shall be allowed to enter the Site, except by written permission of the Owner or the Engineer.

The necessary provisions shall be made for inspection of work at any time by authorized persons.

PA.3.1 SHIPPING AND TRANSPORT TO SITE

The Contractor shall assess the shipping situation in Karachi

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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.

The Contractor shall be fully responsible for off-loading, clearance and transport to Site of all equipment and material needed for the purposes of his Contract including all costs, expenses and any other charges.

PA.3.2 STORAGE AND HANDLING FACILITIES

The Owner will not provide the Contractor with space inside the Power Station for storage of plant, equipment and materials and for temporary site offices during the execution of the Contract.

On no account shall the temporary installations conflict with any of the permanent installations.

The handling and storage of all plant equipment and material at Site shall be at the risk of the Contractor and without responsibility of the Owner.

The Contractor shall protect all material against corrosion, mechanical damage or deterioration during storage and erection on Site. The protection shall be to the approval of the Owner or the

Engineer.

The ends of all nozzles, pipes, tubes and conduits while in storage at the Site shall be covered with a tube cap to seal against entrance of rain water, blowing dirt, and other foreign matter. The outside surface of all tubes shall be protected by a paint coating prior to shipment. Protective coating shall not obliterate ASTM (or equivalent) grade markings, etc. Tubing shall be shipped and stored in neat bundles.

Motors, valves, gauges, etc., shall be stored indoors in a warehouse provided by Contractor. Motor windings shall be kept dry by either the use of external heat, or energizing of the strip heaters in the motors.

Bearings and other machined wearing surfaces of machinery shall be protected against corrosion, and shall be kept clean.

Structural steel, miscellaneous steel, grating walkways, platework, cable trays, and fan housings, etc., shall be protected by a prime coat of paint prior to shipment and shall be kept painted throughout the storage and erection period to prohibit rusting unless such items are galvanized or have other corrosion proof finish.

Thermal insulation shall be stored indoors, or otherwise protected against getting wet.

The Tenderer shall provide with his Tender details of his proposals in respect of stores, laydown areas, office

accommodation and other such facilities and shall include all costs connected with these provisions in his Tender.

PA.3.3 QUALITY CONTROL AT SITE

The Contractor shall provide inspection and testing equipment and instruments for execution of various quality control tasks to be performed by the Contractor's competent personnel in accordance with a Site testing and quality control programme to be established by the Contractor and approved by the Owner/Engineer.

The Site shall be equipped with all necessary testing equipment for quality control of concrete, mechanical destructive and non-destructive tests, radiographic tests of welds, ultrasonic tests of materials and joints, etc. as applicable.

The Contractor shall keep a complete record of all quality tests performed on Site.

Hydraulic tests on Site shall generally be carried out on completed items of plant where applicable. This will include all steam, water, air, fuel gas and fuel oil pipework and pressure vessels.

All quality controls and tests shall be carried out in accordance with applicable standards and codes.

The Contractor shall carry out all necessary surveying work to ensure that the position and elevation of all works erected or constructed by him are correct. The measuring methods and devices used must meet the standard of accuracy required for this purpose. All the surveying work must be based on a geodetic grid established

with adequate accuracy with levels and positions continuously checked and supplemented.

PA.3.4 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.

PA.4. DRAWINGS AND DATA SHEETS

The Contractor shall submit the drawings and data sheets described below to the Owner and the Engineer for approval on or before the specified date. However the number of drawings to be submitted will not be limited to be decided the following and more drawings if required will be supplied by the Contractor. The Contractor shall in principle be permitted to begin manufacture of equipment and

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materials and to begin the erection work only after he has obtained the Engineer's approval of the said drawings and data sheets and has submitted the final drawings.

PA.4.1 DRAWINGS AND DATA SHEETS CLASSIFICATION

Drawings are classified into the following categories:

(1) Drawings for Tendering

The Drawings for Tendering mean the drawings which are attached to the Tender Documents, and they shall be used for Tendering purposes and basic designing.

(2) Contractor's Drawings and Documents

(a) Design drawings

Design drawings mean the ones concerning specification, arrangement, diagram, list, calculation sheet, sequence, test procedure, composition, assembling, piping, structure and foundation, and as well as facility and utility for the Works, and shall be submitted by the Contractor to the Owner and the Engineer.

(b) Working drawings

Working drawings mean the ones for the construction and erection work such as specification, foundation, opening (floor, ceiling, wall), foothold, grating, wiring, cabling, tubing installation as well as civil work.

(c) Shop drawings

Shop drawings mean the manufacturing and fabricating drawings.

(d) Reference drawings

Reference drawings mean the ones to be used for conference purposes and shall be for reference purposes only.

(e) Final drawings

Final drawings mean the ones to be prepared based on the finally approved drawings of which equipment and/or materials shall be manufactured and installed.

(f) Asbuilt drawings

Asbuilt drawings mean the ones showing the equipment, structures, etc., exactly as installed.

PA.4.2 DRAWINGS FOR APPROVAL

In principle, the following drawings shall be submitted to the Owner and the Engineer for approval, and the detail submission of the specified drawings will be decided after the Contract.

- (1) Design drawings showing in the TABLE 1 DESIGN DRAWINGS AND DATA SHEETS
- (2) Working drawings showing in the TABLE 2 WORKING DRAWINGS

PA.4.3 DRAWINGS TO BE SUBMITTED WITHOUT APPROVAL

- (1) Reference drawings
- (2) Final drawings

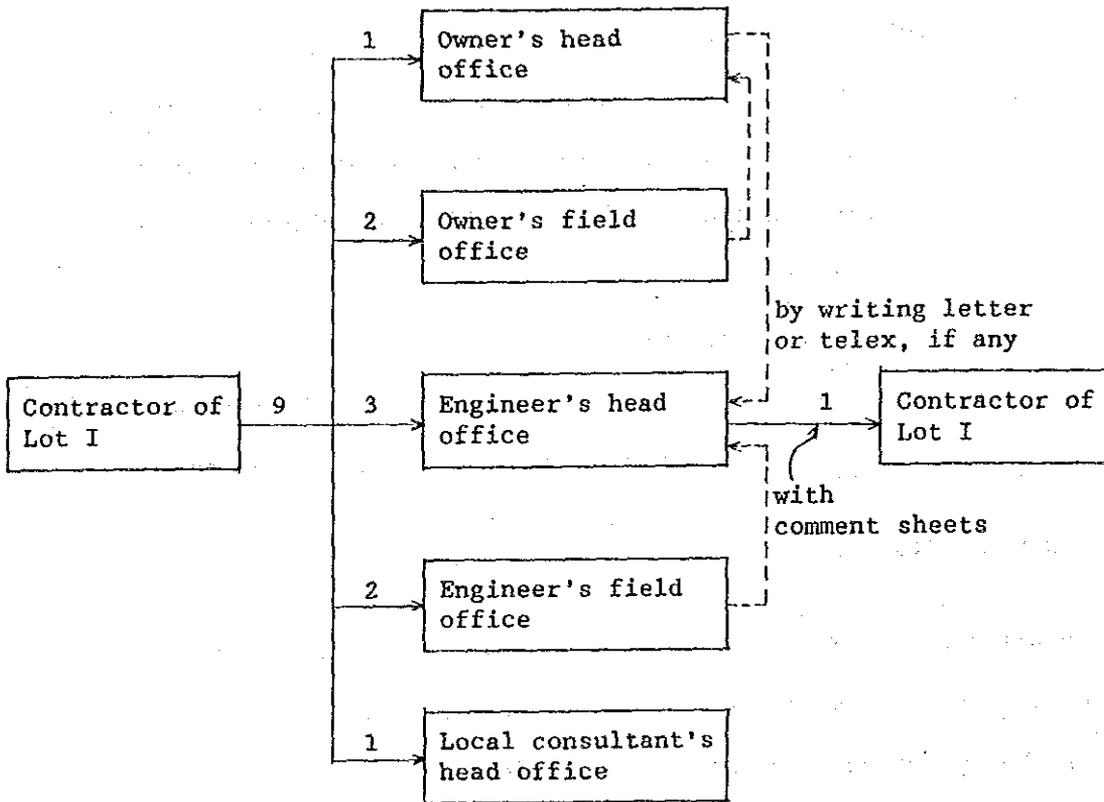
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(3) Asbuilt drawings

PA.4.4 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

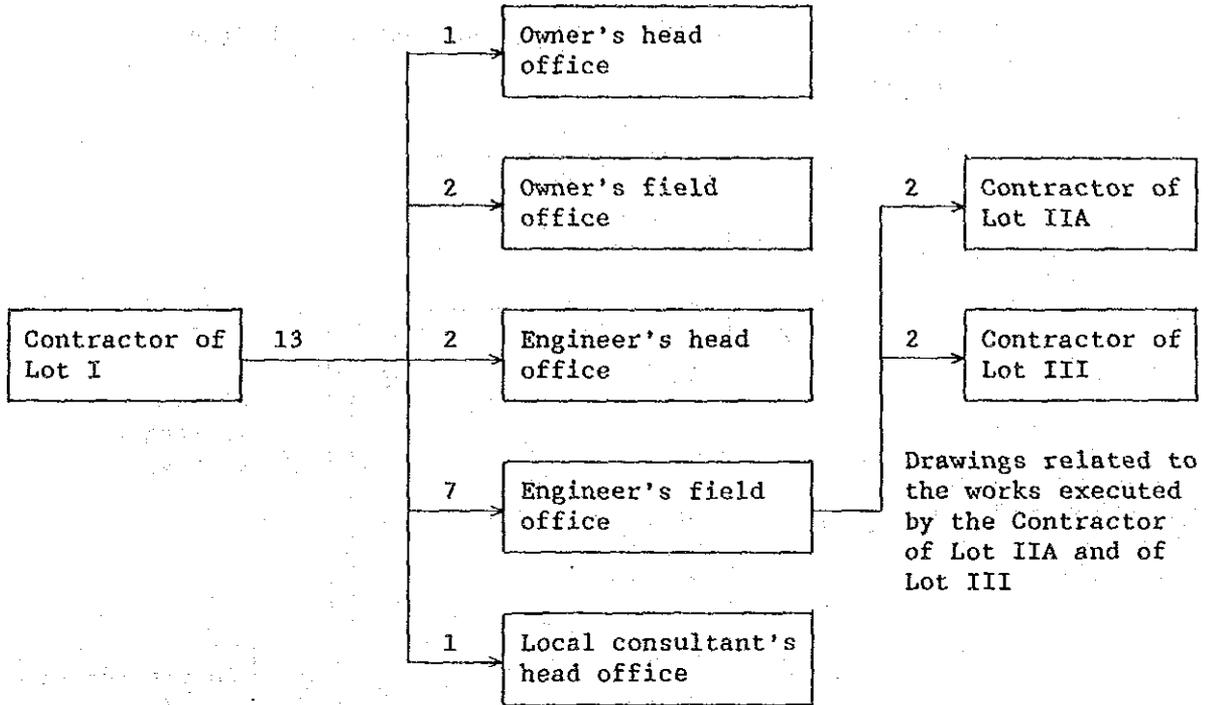


From 2nd submittal on, the Contractor shall submit the drawings with the comment sheets containing the answers of the Contractor.

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

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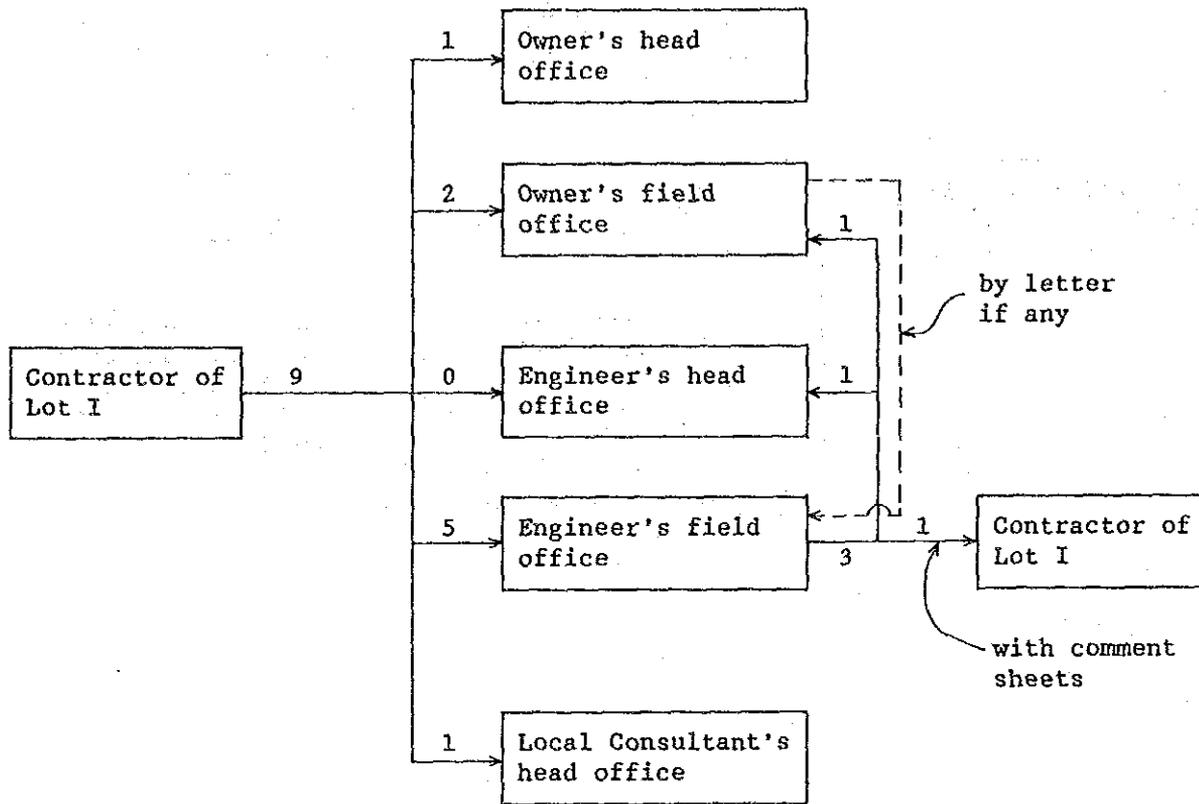
(b) Final drawings (Drawings approved by the Engineer)



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

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



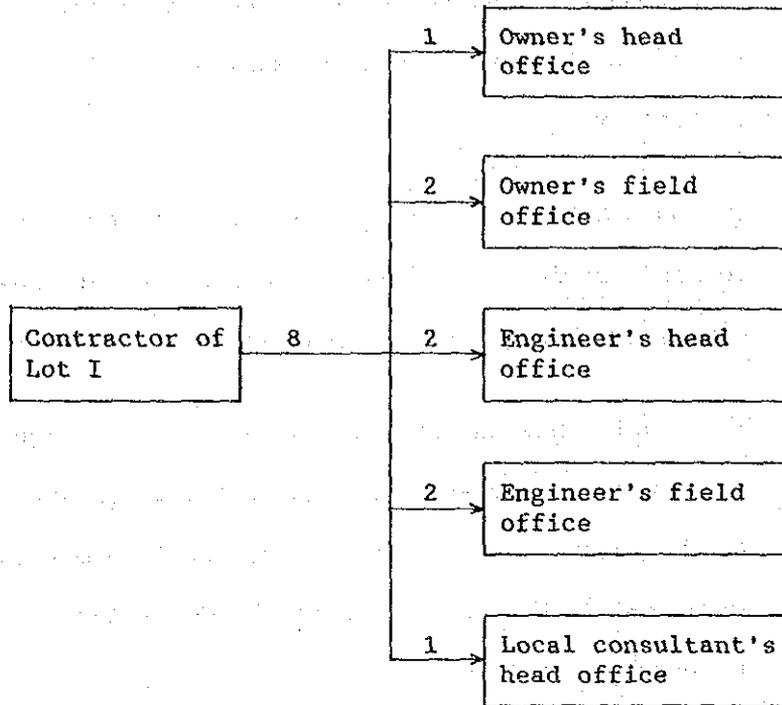
From the 2nd submittal on, the Contractor shall submit the drawings with the comment sheets containing the answers of the Contractor.

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

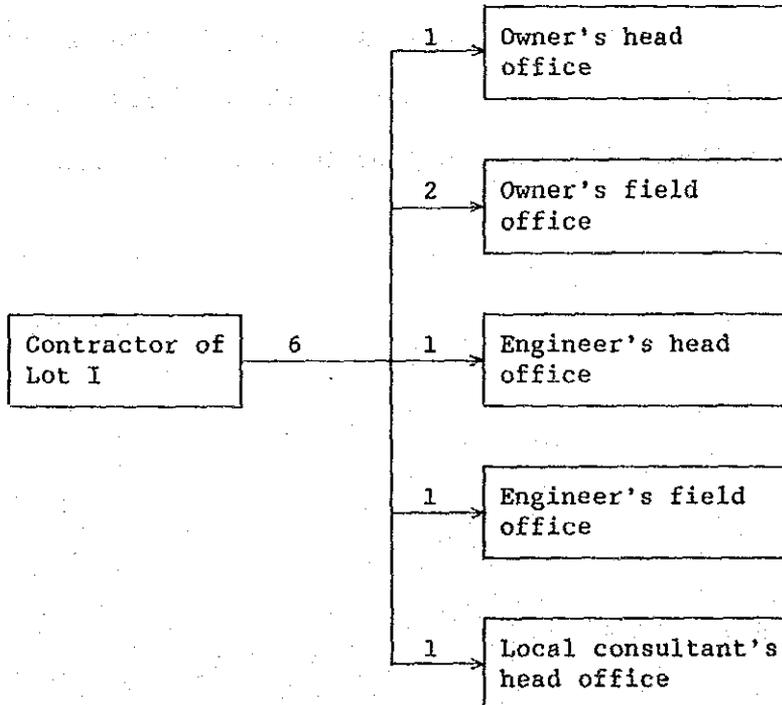
The final working drawings shall be routed as the same flow chart of the final drawings.

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



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



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- (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.